

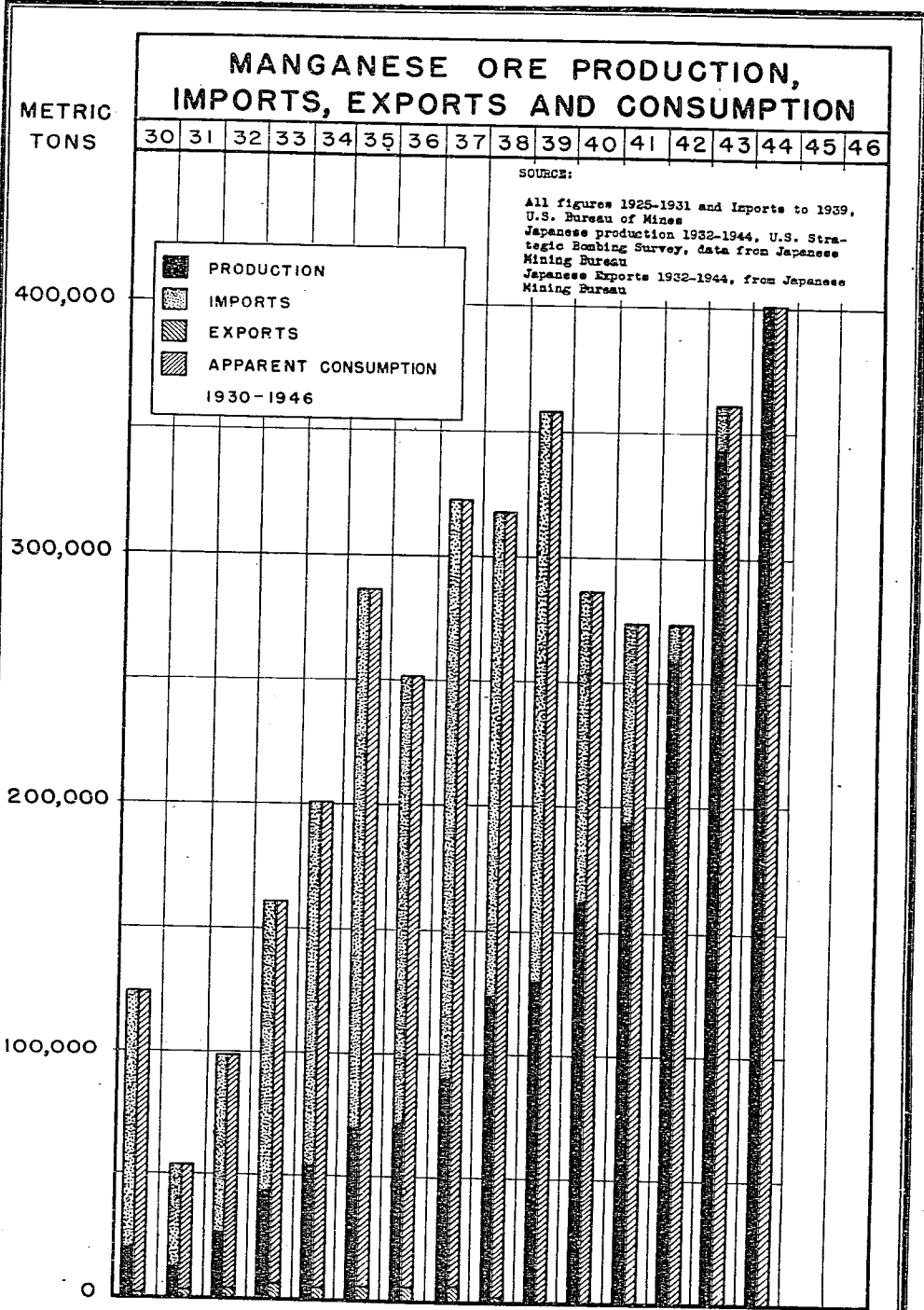
# COPPER

## ORE PRODUCTION BY PRINCIPAL MINES

SOURCE: BASIC MATERIALS DIVISION, U.S. STRATEGIC BOMBING SURVEY  
DATA IN METRIC TONS FROM JAPANESE MINING BUREAU

**JAPAN** 0091 <sup>2/2</sup>

JANUARY 46      GHQ-SCAP      NUMBER 14



## MANGANESE ORE JAPAN

THOUSANDS  
OF  
METRIC TONS

# CERTAIN FERRO-ALLOYS PI

1931 1932 1933 1934 1935 1936 1937 1938 1939

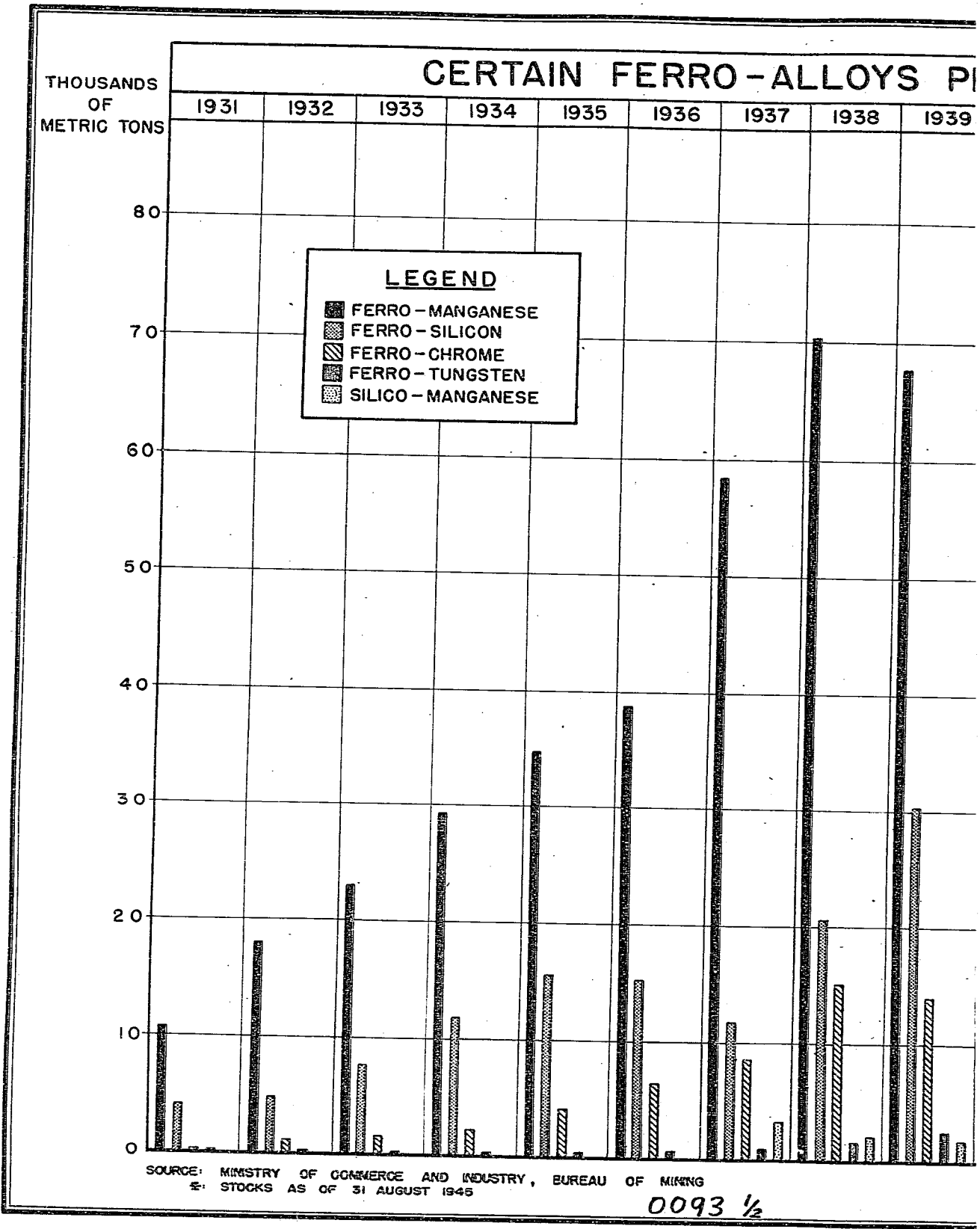
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**LEGEND**

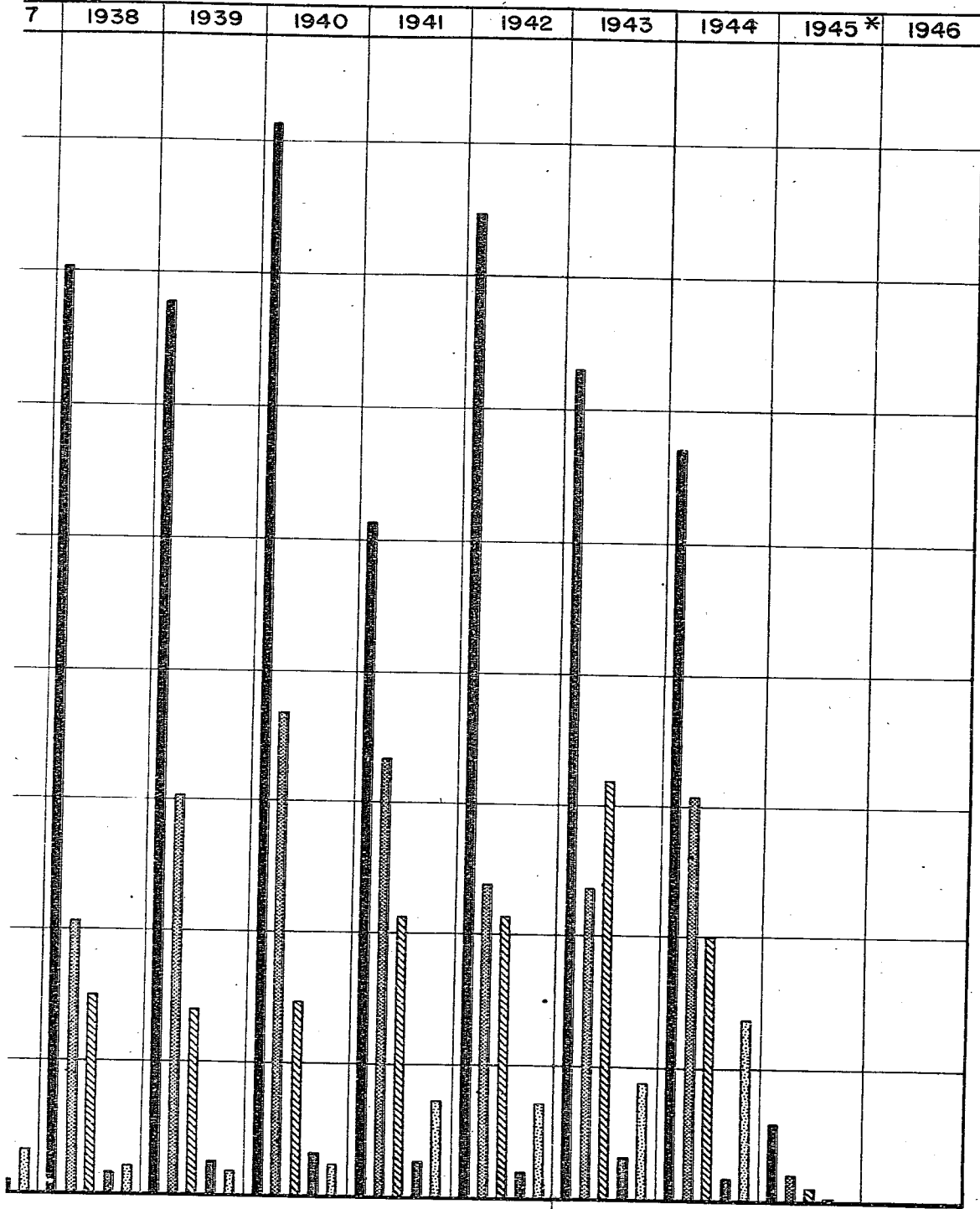
- FERRO - MANGANESE
- ▨ FERRO - SILICON
- ▧ FERRO - CHROME
- ▩ FERRO - TUNGSTEN
- SILICO - MANGANESE

SOURCE: MINISTRY OF COMMERCE AND INDUSTRY, BUREAU OF MINING  
 £ STOCKS AS OF 31 AUGUST 1945

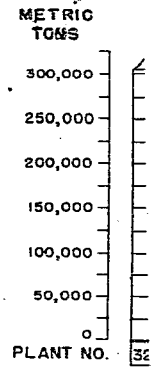
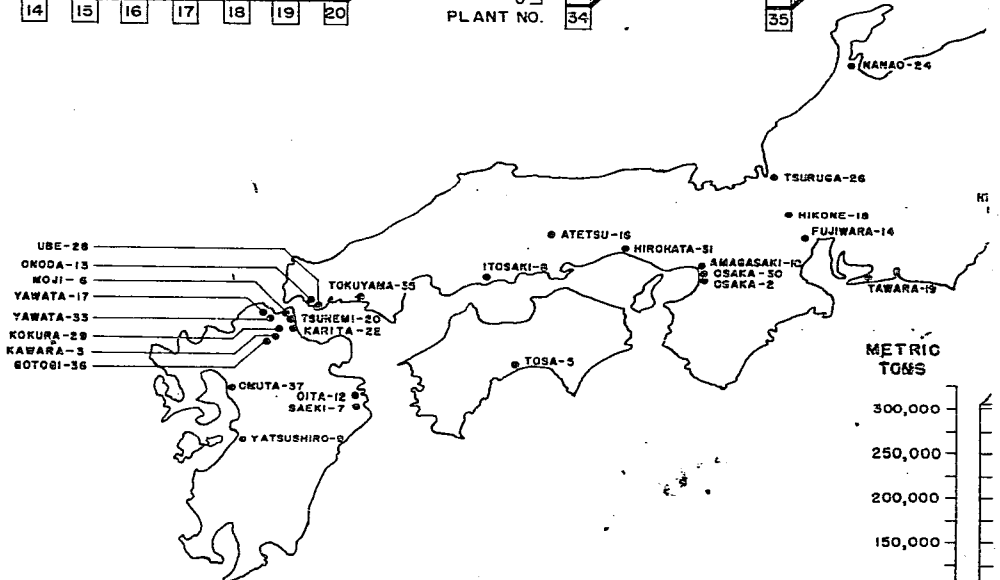
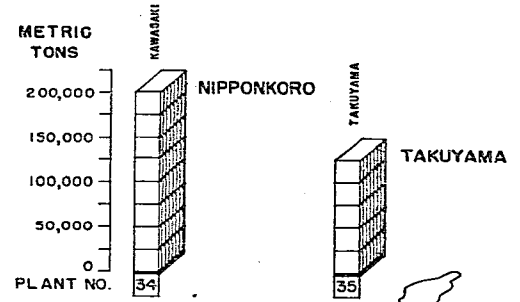
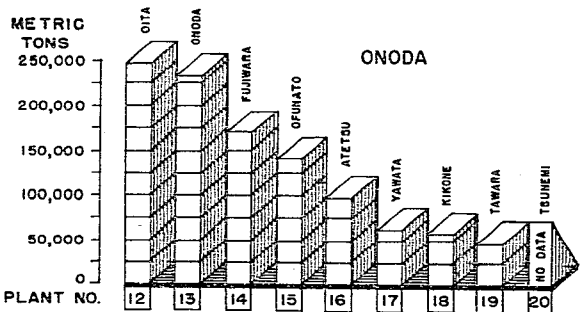
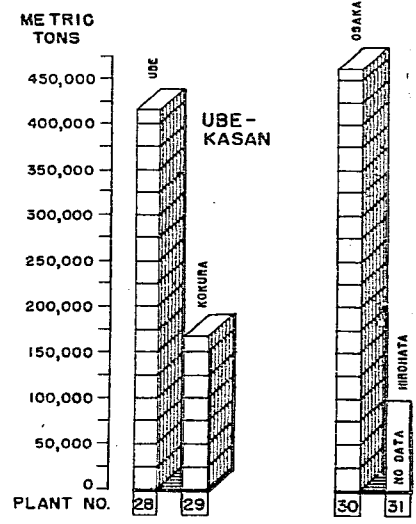
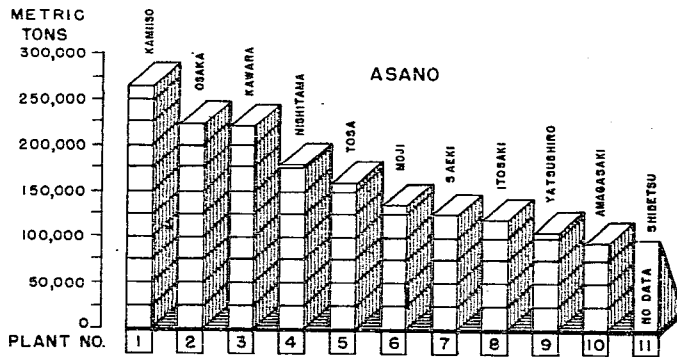
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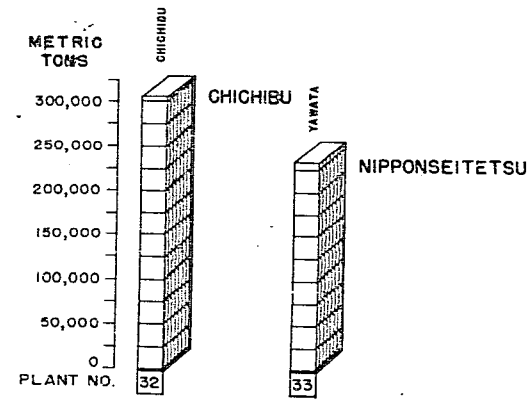
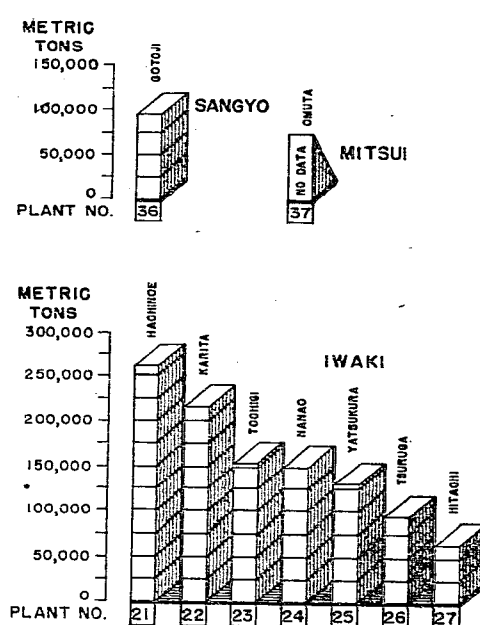
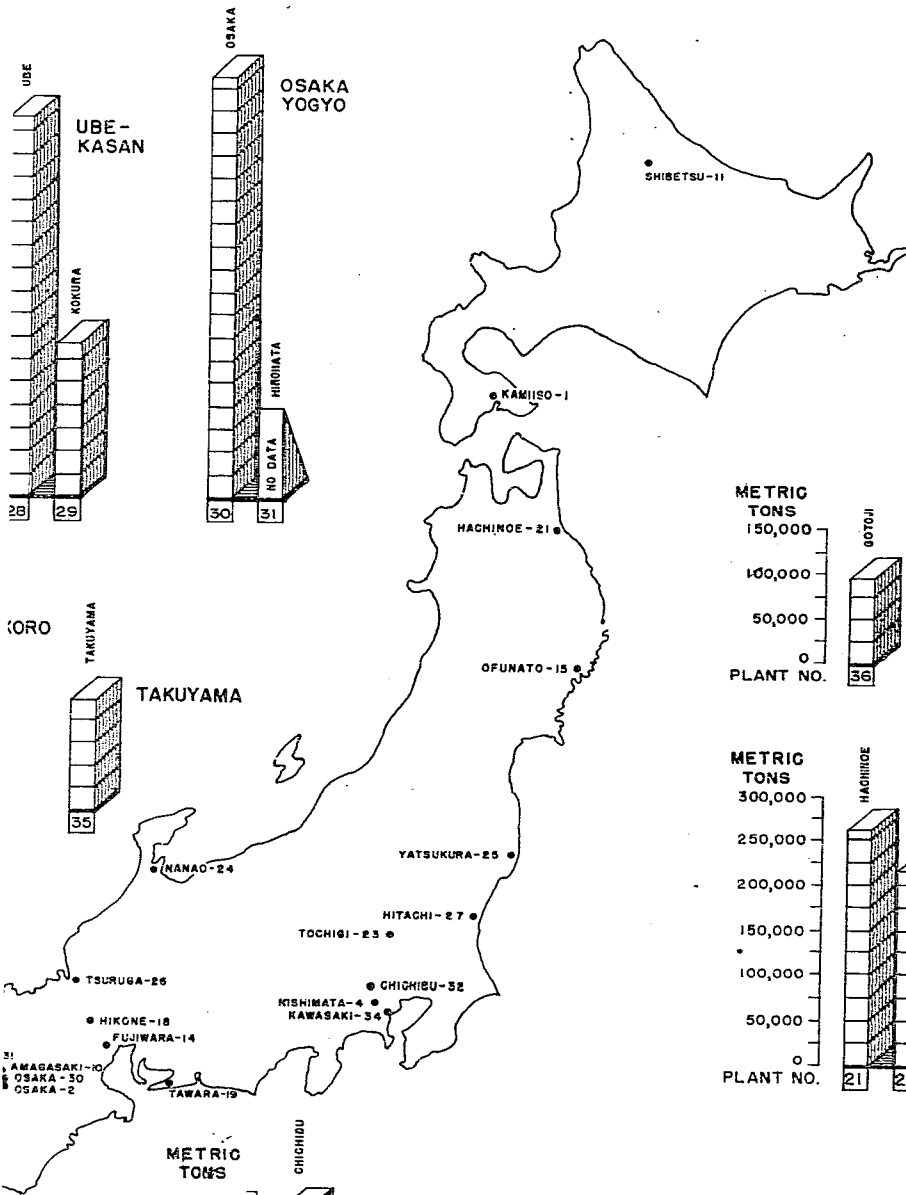
# ALLOYS PRODUCTION - JAPAN



0093 3/2



SOURCE: INDUSTRY SECTION OF THE MINISTRY OF COMMERCE AND INDUSTRY  
 NOTES: (a) PRODUCTION FIGURES ARE FOR THE CALENDAR YEAR  
 (b) PLANTS ARE ARRANGED IN COMPANY GROUPS  
 (c) PLANT NUMBERS ASSIGNED FOR CHART USE ONLY



**CEMENT**

PLANT LOCATION  
AND 1940 PRODUCTION

**JAPAN 0094 3/2**

JANUARY 45    GHQ-SCAP    NUMBER 17

46. Three companies own 27 of the 37 factories. Eleven are owned by Asano Cement Company Ltd., nine by Onoda Cement Company, seven by Iwaki Cement Company Ltd. and the remainder by eight smaller companies.

#### Types of Cement

47. Four types of cement are manufactured. These are Portland cement, silica cement, slag cement and non-constructive or substitute cement. Both ordinary and high early strength Portland cement are made. Silica cement is composed of about 70 percent portland clinker and about 30 percent volcanic ash. Slag cement is generally a low-quality cement made from blast furnace slag. Non-constructive or substitute cement is made of volcanic ash and is similar to puzzolian cement.

#### General Condition of the Factories

48. Cement factories suffered little from air raids, but are in need of repair because of lack of maintenance during the war. At present a great shortage of labor exists. Koreans formerly used in the quarries have either left Japan or refuse to work.

During the last quarter of 1945, less than 7,000 metric tons of coal were delivered to cement factories. At the end of December 42,437 metric tons of coal were on hand at factories. This is enough to last through February with production rate at 50,000 metric tons of cement monthly. The Portland Cement Control Association expects January production to be only 30,000 metric tons. Need for coal is as serious as the need for labor.

49. A shortage of paper cement sacks is now being felt and the Japanese have no reliable substitute.

#### Production and Capacity

50. Total production of cement for 1945 was 1,167,928 metric tons. Of this about 75 percent was Portland cement, 11 percent silica cement, 11 percent slag cement and about three percent non-constructive cement. This is about one-third of pre-war production.

51. Production for the last three months of 1945 was: 39,065 metric tons in October; 53,997 in November; and 64,914 in December. Chart No. 18 shows total production, exports and apparent consumption since 1925.

52. The estimated total capacity for production of cement for 1945 was 3,000,000 metric tons.

#### Stocks

53. Total stocks as of 31 December 1945 were 134,745 metric tons of clinker and 66,153 metric tons of cement.

#### Exports

54. Japan had a substantial export trade in the Orient, amounting to more than 20 percent of total production in the middle thirties. No cement was imported.

#### SAND AND GRAVEL

55. River gravel and sand are plentiful in Japan, especially in the lowland areas where larger cities are located. This type

of deposit furnishes over 90 percent of sand and gravel used for concrete, road surfacing, fill and other construction purposes. Dredges are used in about four percent of operations; in others, hand-loading methods are utilized. Drag lines are not used.

56. Before December 1941, 3,000 gravel companies were in operation; of these, 100 companies operated a total of about 150 dredges. During the war, road repair virtually ceased, and at present only 750 companies are operating; of these, 30 companies operate a total of about 65 dredges. Most dredges are of less than 100 horse power; the average is approximately 50 horse power.

57. The largest number of dredging operations are carried on in Kanagawa, Saitama and Wakayama Prefectures on Honshu, and in Tokushima Prefecture on Shikoku. Dredging is also carried on in Hokkaido and in Miyagi, Ibaraki, Gumma, Tochigi, Tokyo, Toyama, Mie and Kyogo Prefectures on Honshu; in Ehime Prefecture on Shikoku; and in Fukuoka Prefecture on Kyushu.

58. Large natural terrace deposits constitute another source of sand and gravel, especially on Honshu. Gravel and sand pits have been opened by the U. S. Army Engineers in these deposits; the Japanese, on the other hand, prefer river gravels because they are fresher and more resistant to wear and weathering than most terrace gravels.

Because of low freight rates it has been the Japanese practice to ship gravel as far as 50 kilometers by rail. Terrace gravel and sand have been used only in such areas as Chiba Prefecture, where river sand and gravel are not available. Both the river and terrace gravels are composed of resistant rock types such as fine-grained hard volcanic rocks, chert and quartzite.

59. The sand and gravel business is diffused; it has never been placed under centralized control as is the case with mining. At present gravel operations are supervised by the prefectural governments.

60. The following rivers are the chief sources of sand and gravel in Japan:

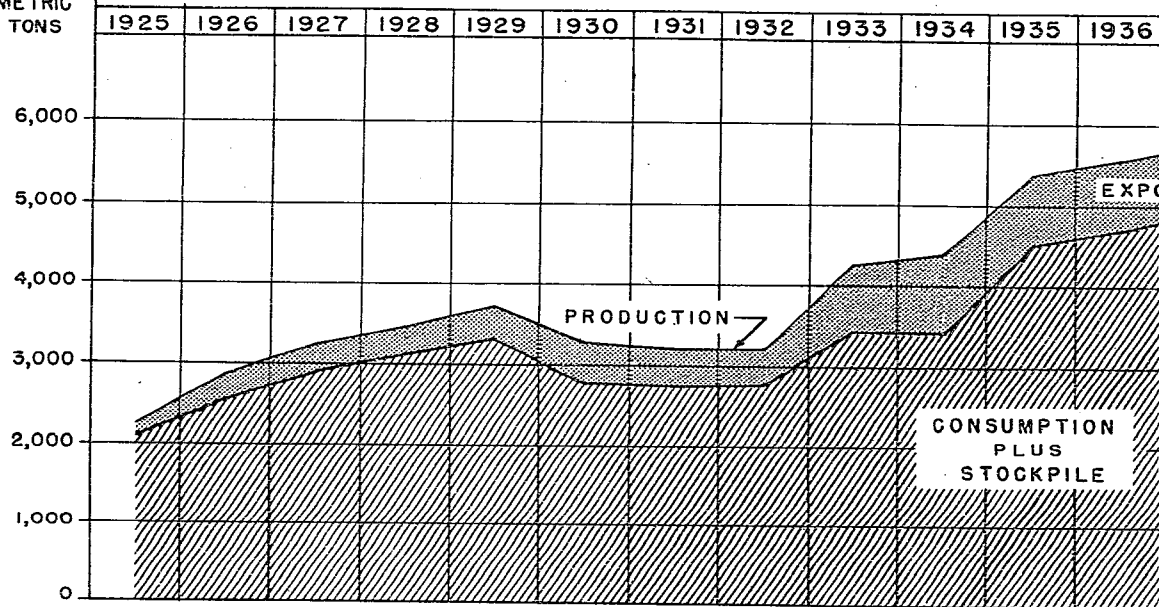
#### SAND AND GRAVEL SOURCES

<u>Island</u>	<u>Prefecture</u>	<u>River</u>
Hokkaido		Yubari
Honshu	Ibaraki	Ishikari
	Ibaraki	Kuji
	Tochigi	Kinu
		Hata a/
	Tochigi	Akiyama a/
	Saitama	Ara a/
	Tokyo	Tama a/
	Kanagawa	Sagami b/
	Kanagawa	Katsura
	Kanagawa	Sakawa
	Shizuoka	Tenryu
	Gifu	Nagara
	Shiga	Yokota a/
Kyoto	Kitsu	



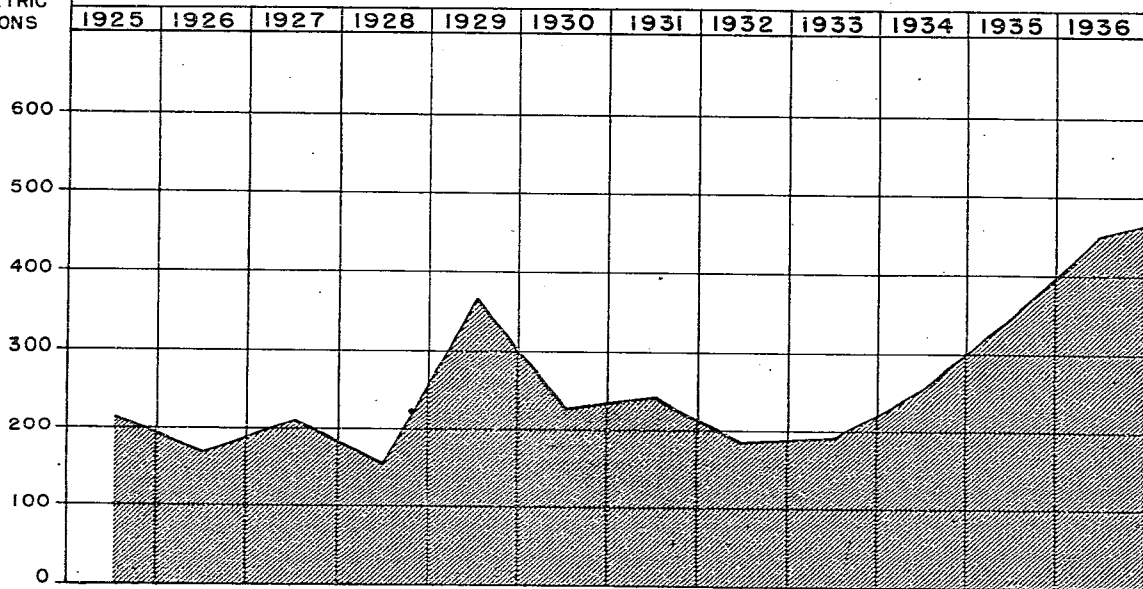
## CEMENT PRODUCTION AND (IN METRIC TON

THOUSANDS  
OF  
METRIC  
TONS



## CEMENT AND CLINKER S (IN METRIC TON

THOUSANDS  
OF  
METRIC  
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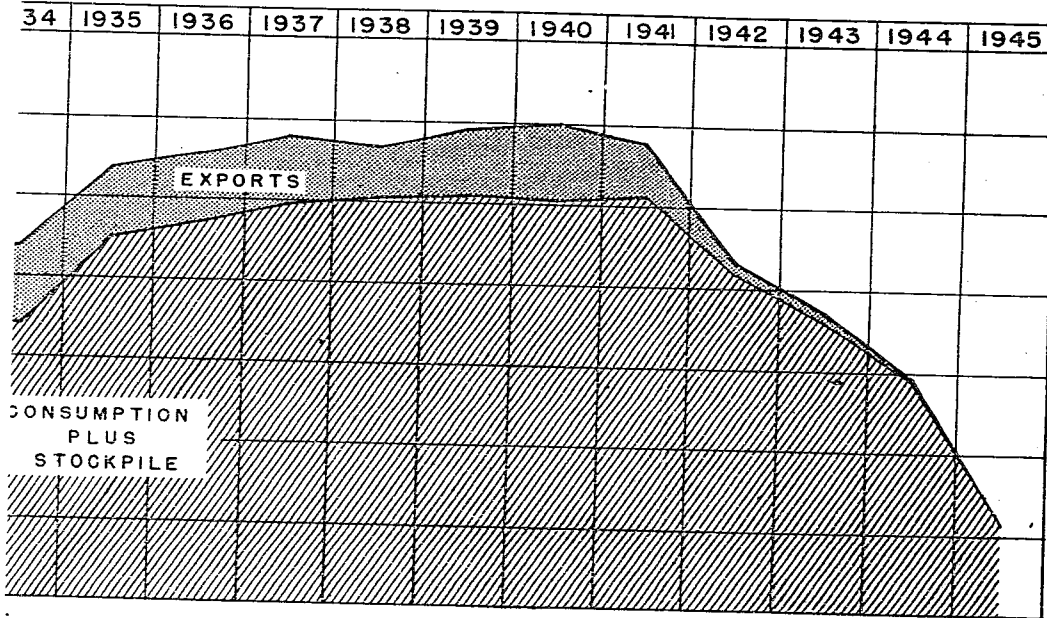
SOURCE: MINISTRY OF COMMERCE AND INDUSTRY

NOTE: ALL FIGURES REFER TO STOCKS AS OF THE END OF DECEMBER OF PARTICULAR YEAR

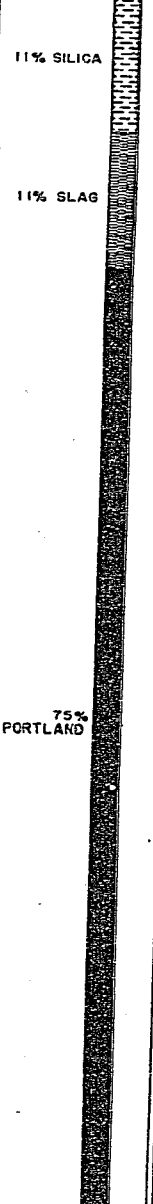
0097 ½

# ON AND EXPORTS - JAPAN

(METRIC TONS)

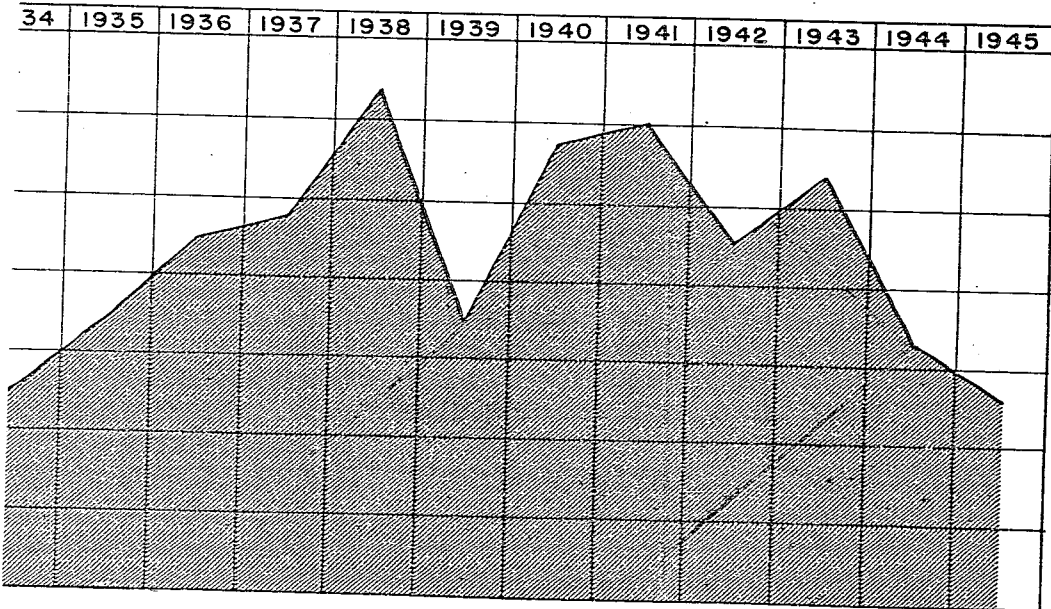


TYPES OF CEMENT PRODUCED IN 1945



# CEMENT STOCKS - JAPAN

(METRIC TONS)



ARTICULAR YEAR

1/2

JANUARY 45

GHO SCAP

0097 3/2  
NUMBER 18

<u>Island</u>	<u>Prefecture</u>	<u>River</u>
Honshu	Wakayama	Kino
	Hyogo	Ibo
	Hyogo	Chikusa
Kyushu	Kumanoto	Midori

- a/ Large producers  
b/ Largest producer in Japan

SOURCE: Civil Engineering Bureau, Ministry of Commerce and Industry.

#### CRUSHED ROCK

61. Crushed rock, particularly andesite and granite, is used for base course and road metal on many important Japanese roads and in airfield construction. Its largest use is in Kyushu, where gravel is scarce; in Honshu, Shikoku and Hokkaido the general tendency is to use crushed rock only for those highways which will bear the heaviest traffic, or in the few areas where gravel is not available. At present, because of lack of adequate machinery, little crushed rock is being produced.

62. The Ministry of Commerce and Industry classifies crushed rock in the following six categories, based upon size of fragments: (1) Less than 5 mm; (2) 5 - 10 mm; (3) 5 - 20 mm; (4) 5 - 40 mm; (5) 20 - 80 mm; (6) 80 - 120 mm.

Production in 1943 for the principal crushed-rock producing prefectures of Japan was:

#### SOURCES OF CRUSHED ROCK IN JAPAN

<u>Prefecture</u>	<u>Rock Type</u>	<u>1943 Production (in cubic meters)</u>
Tokyo and Kanagawa, Honshu	Largely andesite	19,200
Yamanashi, Honshu	Largely granite	108,000
Osaka, "	" "	20,000
Shiman, "	" "	30,000
Aomori, "	" "	47,200
Fukuoka, Kyushu	" "	378,000
Oita, "	" "	47,200

SOURCE: Civil Engineering Bureau, Ministry of Commerce and Industry.

#### BUILDING STONE

63. Before the war, considerable dimension stone was quarried in Japan all for domestic use. Operations were carried on entirely by small locally-owned companies. Most quarries are on the island of Honshu.

64. The following are the principal building stones produced in order of their importance:

Granite. Quarried in the Inland Sea area, especially near Okayama, Hiroshima and Yamaguchi; also produced in Ibaraki Prefecture.

Rhyolitic tuff (solidified volcanic ash). Quarried in Tochigi Prefecture.

Limestone. Quarried in Gifu Prefecture.

Marble and Serpentine. Quarried in Gifu Prefecture.

Sandstone. Quarried in Fukushima and Chiba Prefectures.

Pumiceous tuff (solidified volcanic ash). Tochigi and Chiba Prefectures are the chief source of this material which is used for facing of buildings. Other sources are southwestern Hokkaido, Northern Aomori Prefecture and Akita, Yamagata, Miyagi, Fukushima and Shizuoka Prefectures. Small-scale operations were carried on in the Inland Sea area and in Kumamoto Prefecture on Kyushu.

65. The greatest demand for stone blocks is for building retaining walls along streams and road cuts. Locally, stream boulders are cut into shape for this purpose. Such crude stone cutting is the only portion of the industry active at present.

#### WATER RESOURCES

66. Japan's dependence on water for both power and irrigation has made it necessary to maintain river measurement stations on almost every important stream. Data obtained from these stations are used as a basis for operating present hydro-electric plants, planning new hydro-electric developments, dividing available water between power and irrigation interests, operating flood control and diversion structures, planning river improvements and for many other purposes. The stations were operated throughout the war and are still in operation.

67. Several agencies of the Japanese Government are interested in stream gauging programs and each agency operates numerous river measurement stations for specific purposes. Each agency apparently uses different stream gauging procedure. Preliminary studies indicate that little coordination or cooperation exists between these agencies.

68. The development of the water resources of Japan continued at an accelerated rate during the period of preparation for war and during the war. In the years 1938 to 1945, according to the Electric Power Bureau, Ministry of Commerce and Industry, 143 hydro-electric plants were placed in operation with installed capacity in excess of 2,000,000 kilowatts. In addition there were 44 hydro-electric plants with planned capacity of approximately 5,000,000 kilowatts. In Nagano Prefecture alone, 19 plants were constructed during this period.

SECTION 3

INDUSTRY

C O N T E N T S

	Paragraph
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Chemical Industries . . . . .	41
Transportation Equipment. . . . .	46
Textile Industry. . . . .	54
Other Manufacturing . . . . .	64
Construction. . . . .	94
Rubber. . . . .	95
Petroleum . . . . .	96

GENERAL

Reparations

1. Allied custody was established over 394 industrial plants to insure their availability in good condition for reparations. This was the initial measure in the implementation of a reparations program.

Production

2. Industrial production continued to lag with two factors predominating. One was the continued shortage of coal and the other was the week-long New Year's holiday during which many industries were shut down.

3. Coal stocks on hand at the end of January were 1,816,000 metric tons. Safe running stocks are said to be 1,500,000 metric tons. It is expected that stocks will approximate 1,000,000 metric tons by June 1946, after which they should increase. Coal in many stock piles is badly deteriorated and not readily available for industrial uses.

MINERAL INDUSTRIES

Iron and Steel

4. Progress during December and early January was impeded by continued shortages of vital raw materials, particularly coal and coke. Production trends and operating plants are as follows:

IRON AND STEEL PRODUCTION  
October-December 1945 a/  
(metric tons)

	<u>October</u>	<u>November</u>	<u>December</u>
Pig iron	9,568	7,688	9,036
Steel ingot	8,443	9,603	8,770
Steel material	3,020	6,894	9,495

a/ Third quarter of fiscal year.

SOURCE: Japanese Iron and Steel Council.

PLANTS IN OPERATION  
31 December 1945

<u>Products</u>	<u>No. of Plants</u>
Pig iron	3
Ingot steel	2
Ordinary rolled steel	11
Cast steel	78
Special steel	24
Forged steel	0

SOURCE: Japanese Iron and Steel Council.

5. Coke production decreased from 128,000 metric tons in November to 107,000 metric tons in December. January production is not expected to exceed 90,000 metric tons. Future production will depend on the allotment of coal to the iron and steel and illuminating gas industries which are large coke producers.

Light Metals

6. The aluminum industry commenced operation on 25 November 1945. December production was 58,677 kilograms, the only producer being the Nippon Light Metals Company.

Incomplete reports from Japanese Army and Navy inventories indicate that about 150,000 metric tons of aluminum and aluminum alloys exist in Japan, making her self-sufficient in such material for about eight to 10 years.

Magnesium production remains at a standstill.

7. Twenty-two plants rolled 641 metric tons of aluminum and aluminum alloys during December as indicated below:

ROLLING MILL PRODUCTION  
December 1945  
(metric tons)

<u>Item</u>	<u>Aluminum</u>	<u>Aluminum Alloy</u>	<u>Magnesium</u>	<u>Total</u>
Sheet	502	135	0	637
Wire	<u>3</u>	<u>1</u>	<u>0</u>	<u>4</u>
Total	505	136	0	641

SOURCE: Light Metals Rolling Industry Association.

8. In December 159 plants produced 632 metric tons of aluminum and aluminum alloy castings as compared to, a January estimate of approximately 1,000 metric tons. Greatest demand is for household utensil manufacture which had a capacity rate in August 1945 of approximately 6,000 metric tons per year. This was sufficient to provide one pound of aluminum utensils per household per year.

Copper

9. Four of Japan's 14 smelters were in operation during December and produced 370 metric tons of crude copper. The January estimate is about 600 metric tons. Production was limited by lack of coal.

10. Three of Japan's 12 copper refineries operated in December and produced 150 metric tons of electrolytic copper. Approximately 800 metric tons of pure copper is expected to be produced during January.

11. The wire and cable industry operated at about 25 percent capacity during December.

WIRE AND CABLE PRODUCTION AND STOCKS  
December 1945 and January 1946  
(metric tons)

	<u>Dec Pro- duction</u>	<u>Estimated Jan Pro- duction</u>	<u>Present Ca- pacity of Operating Industry</u>	<u>Stocks of Raw Mater- ials</u>	<u>Stocks of Pro- ducts</u>
Bare wire	513	1,010	2,640	-	805
Weatherproof wire	635	997	2,750	-	891
Magnet wire	301	550	880	-	410
Power cable	135	199	490	-	256
Communication cable	37	258	435	-	52
Copper	-	-	-	9,080	-
Rubber	-	-	-	964	-
Lead	-	-	-	3,771	-
Cotton	-	-	-	408	-
Total	1,621	3,014	7,195	14,223	2,413

SOURCE: Electric Wire and Cablemaker's Association of Japan.

12. The copper and copper alloy rolling industry showed a decided upward trend with 65 plants in operation during December as compared with about 20 in the previous month.

**COPPER AND COPPER ALLOY ROLLING INDUSTRY**  
(metric tons)

<u>Classification</u>	<u>December Production</u>	<u>Present Capacity Working Industry</u>	<u>Products on Hand</u>
<b>Copper</b>			
Sheet	42		183
Pipe	60		196
Rod	21		152
Strip	0		125
Wire	<u>50</u>		<u>7</u>
<b>Total</b>	<b>173</b>	<b>1,010</b>	<b>663</b>
<b>Brass</b>			
Sheet	103		111
Pipe	22		34
Rod	196		585
Strip	20		0
Wire	<u>90</u>		<u>102</u>
<b>Total</b>	<b>431</b>	<b>1,799</b>	<b>832</b>
<b>Bronze</b>			
Sheet	8		9
Pipe	0		0
Rod	0		26
Strip	0		0
Wire	<u>3</u>		<u>4</u>
<b>Total</b>	<b>11</b>	<b>43</b>	<b>39</b>

SOURCE: Copper and Its Alloys Rolling Industry Association.

Zinc

13. In December four of Japan's eight refineries produced 856 metric tons of refined zinc. January output is not expected to exceed that amount. Lack of coal was responsible for continued low production. Stocks of zinc in refineries on 31 December were 5,960 metric tons.

Lead

14. December production of 155 metric tons was approximately five percent of the 1944 monthly average and at the rate of about three and one-half percent of the present estimated yearly capacity of 83,800 metric tons. Stocks of lead at refineries on 31 December totalled 10,430 metric tons.

Ferro Alloys

15. During December 22 plants produced ferro alloys as follows:



**FERRO ALLOY PRODUCTION**  
**31 December 1945**  
 (metric tons)

<u>Classification</u>	<u>December Production</u>	<u>Stocks 31 December a/</u>
Ferro manganese (H.C.)	5	814
Ferro-Silicon-manganese Sprengel	155	1,663
Ferro manganese (L.C.)	230	903
	<u>56</u>	<u>153</u>
Total	446	3,533
Ferro silicon No. 1	0	220
Ferro silicon No. 2	0	2
Ferro silicon No. 3	0	210
Ferro silicon No. 4	67	95
Ferro silicon No. 5	141	544
Ferro silicon No. 6	<u>18</u>	<u>41</u>
Total	226	1,112
Ferro chrome (H.C.)	0	10
Ferro chrome (L.C.)	<u>30</u>	<u>297</u>
Total	30	307
Ferro vanadium	0	35
Ferro molybdenum	0	2
Ferro tungsten	<u>0</u>	<u>1</u>
Total	0	38

a/ Stocks in operating plants.

SOURCE: Ministry of Commerce and Industry.

**MACHINERY INDUSTRIES**

16. The acute shortage of coal continued to retard production in the machinery industries.

17. Under a directive of 20 January 1946 Allied authorities took custody of 394 arsenals, military laboratories and aircraft factories to preserve them for reparations.

18. It is believed that nearly all Japanese sources of statistical information regarding Japanese machinery inventories and production capacities have been investigated.

Aircraft Industry

19. Production of any kind was still suspended in most of the aircraft industry's plants.

By 25 January 1946 permits for conversion to the production of essential civilian commodities has been granted to 51 of the 267 major factories. All 51 permits are being reviewed and will be cancelled if the plant is not now engaged in production of commodities immediately essential to the civilian economy.

20. As of 31 December 1945, in compliance with an 18 November directive, all governmental and semi-governmental bodies connected with aircraft were abolished.

21. The December press statement of interim reparations policy recommended that 100 percent of the machinery, machine tools and technical equipment in the Japanese aircraft industry should be available for interim reparations. During January 267 factories previously engaged in the production of aircraft engines, assemblies, propellers and parts were taken under custody and control of the Allied Occupation Forces. These factories constitute 80-90 percent of the productive capacity of the Japanese aircraft industry.

MAJOR JAPANESE AIRCRAFT FACTORIES IN ALLIED CUSTODY  
31 January 1946

	<u>Honshu</u>	<u>Kyushu</u>	<u>Shikoku</u>	<u>Hokkaido</u>
Aircraft frame plants	80	7	1	1
Aircraft engine plants	49	0	0	0
Propeller plants	19	0	0	0
Ordnance plants	109	1	0	0

SOURCE: 1. Ministry of Commerce and Industry.  
2. Japanese Aircraft Control Associations.

Under Allied supervision the Japanese are providing proper maintenance of all machinery and machine tools in these plants, safeguarding them against theft or sabotage and preventing the unauthorized movement of equipment.

Machine Tools and Precision Bearings

22. Continued uncertainty regarding reparations affecting these industries has retarded the manufacturer's activities. There were organizational changes and output during the month was small.

23. The creation of a new group called the Japan Machine Tool Makers Association is being discussed by 115 members of the present control association. Their stated objectives are to preserve the industry intact within restrictions of Allied policy and to promote technical and production improvements.

24. Individual factories are retaining small working forces to complete partly finished goods in stock. Repair and maintenance of machinery has not been adequate due to shortages of protective lubricants and personnel factors.

25. Under guidance of the Ministry of Commerce and Industry a temporary board has been set up to locate and inventory existing stocks of bearings and to recommend their allocation. Limited production of bearings is continuing but most needs are expected to be filled from holdings in government arsenals and aircraft factories.

26. The Ministry of Commerce and Industry has arranged for allocation of certain precision bearing stocks found in arsenals to fill orders from coal mine operators. Similar action has been taken with copper wire for rewinding motors, wire hoisting cable, rock drills, air compressors and other maintenance or repair items needed at the mines.

Other Machinery

27. Reported installations of machines other than machine tools in Japanese Army Arsenals are:

**MACHINES OTHER THAN MACHINE TOOLS a/**  
31 December 1945

	<u>Units b/</u>
Power hammers	628
Hydraulic presses	441
Other power presses	2,109
Air compressors	378
Powder making machines	198
Bullet making machines	4,334
Locomotives	27
Motor cars and trucks	863
Electric motors	7,585
Electric transformers	5,032
Electric furnaces	664
Wood working machines	851
Hardness testers	841
Toolroom microscopes	180
Impact testers	50
Miscellaneous measuring machines	169

a/ Installed in Japanese army arsenals.

b/ No allowance made for war damage estimated at 10 percent.

28. The Road Section of the Home Ministry has submitted estimates of new equipment required in 1946 and 1947. Major items are:

	<u>1945</u> <u>Units</u>	<u>1947</u> <u>Units</u>
Excavating machines	4	8
File drivers	16	30
Concrete mixers	115	225
Road rollers	65	130
Concrete rollers	4	7
Asphalt plants	2	4
Bulldozers	4	8
Loaders	4	8
Rock crushers	20	40
Gravel plants	2	4
Well drilling machines	7	13
Boring machines	7	13

SOURCE: Ministry of Home Affairs.

Based on U.S. standards these requirements seem small and indicate both the minor nature of the road network and the great dependence on manual labor for both construction and maintenance.

**FOOD PROCESSING INDUSTRIES**

Canned Foods

29. Thirty-two of Japan's 310 canneries were in operation during December and produced 17,275 cases (48 pounds per case), chiefly of mandarin oranges, against an estimated monthly capacity for the industry of 1,015,000 cases.

Inability of canners to purchase raw materials economically makes production plans and estimates difficult to formulate. The

Japanese Government has indicated that corrective action will be taken. The shortage of coal and the slack season also account for the limited production.

Employment has increased from month to month as many canneries are engaged in preparing their plants for the approaching canning season.

The following statistics indicate the increase in production.

**INDUSTRIAL CANNING**  
November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
Production (in cases)	9,450	17,275	47,050
Canneries in operation	8	32	--
Employees	4,109	7,412	--

SOURCE: Japan Canned Goods Control Company, Ltd.

Flour Milling

30. December production declined only slightly. Although many small mills exhausted their wheat stocks and closed down, the large modern mills continued to process former Japanese Army and Navy stocks allotted to them by the government. The shortage of flour sacks and bags continued. Wheat in the hands of millers on 31 December totalled 34,940 metric tons.

**FLOUR MILLING**  
November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
Production (metric tons)	32,000	30,343	34,844
Factories in operation	2,500	1,012	--
Employees	7,000	7,046	--

SOURCE: Ministry of Agriculture and Forestry.

Sugar Refining

31. Sugar refining was confined to Hokkaido where three plants were processing sugar beets. December production was hindered by insufficient transportation, heavy snowfalls and continued shortages of labor and fuel. Processing is expected to be discontinued temporarily in February 1946.

**SUGAR REFINING**  
November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
Production (metric tons)	2,213	3,812	1,380
Refineries in operation	3	3	3
Employees	1,219	1,235	--

SOURCE: Ministry of Agriculture and Forestry.

Shoyu (Soy Sauce)

32. Production of finished shoyu declined slightly during December. Production of new shoyu mash continued on a reduced scale due to the scarcity of soy beans and salt. Stocks of raw materials in metric tons as of 31 December included 9,645 of soy beans, 6,786 of wheat and 4,904 of salt, according to the Ministry of Agriculture and Forestry.

SHOYU INDUSTRY  
November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
Production (metric tons)	38,947	34,345	30,608
Factories in operation	5,874	5,874	--
Employees	16,300	16,900	--

SOURCE: Ministry of Agriculture and Forestry.

33. The use of substitute materials is being studied by the industry. The Noda Shoyu Company has reported experiments which indicate that copra-meal can be utilized in the place of soy beans.

34. Thirty-six of the 53 synthetic shoyu factories were in operation at some time during December producing 629 metric tons. The January estimate is 2,000 metric tons (subject to downward revision) and the estimated monthly capacity for the industry is 23,722 metric tons. Limited output was attributed to continued shortages of salt, hydrochloric acid, soy bean cake, fish meal and wheat flour.

Miso (Bean Paste)

35. Miso production continued to decline in December despite optimistic statements of the industry. This situation was caused by shortages of soy beans and other raw materials coupled with inadequate transportation and erratic delivery service.

Sweet potatoes are being used for the first time, on a limited scale, in the manufacture of miso.

MISO MANUFACTURE  
November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
Production (metric tons)	24,679	19,998	40,196
Factories in operation	3,981	3,753	--
Employees	23,372	21,837	--

SOURCE: Ministry of Agriculture and Forestry.

Brewing

36. Reasons given for December's 13 percent decline in production were: delays in obtaining allotted raw materials caused by transportation difficulties; shortages of bottles, caps and packing boxes; high prices of raw materials and other supplies.

BEER MANUFACTURE  
November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
Production (hectoliters)	89,386	63,803.	90,000
Plants in operation	13	13	13
Employees	4,202	3,854	--

SOURCE: Ministry of Finance.

Distilling

37. Other liquors produced include sake, shochu (a distilled gin-like beverage), imitation sake and various wines and whiskies. Their production is controlled through the allotment of raw materials by the government.

38. Sake is produced in greater volume than any other liquor. Its production season is from January through March. Imitation sake is chiefly distilled from sweet potatoes and is artificially flavored. Production is high because it is not necessary to use rice and because of the demand for any kind of sake. During December the government permitted a 10 percent price rise but decreased the allotment of rice for 1946 sake production from 127,500 to 97,500 metric tons.

DISTILLERY PRODUCTION AND STATISTICS  
November 1945-January 1946  
(hectoliters)

	<u>November</u>	<u>December</u>	<u>January</u> <u>(Estimated)</u>
<u>Production</u>			
Sake	0	250	27,000
Imitation sake	12,719	11,541	36,000
Shochu	8,414	17,971	54,000
Others (whiskies and wines)	<u>29,995</u>	<u>4,415</u>	<u>16,200</u>
Total	51,128	34,177	133,200
<u>Factories in operation</u>			
Sake	0	843	
Imitation sake	30	33	
Shochu	166	313	
Others	<u>1,230</u>	<u>253</u>	
Total	1,485	1,442	
<u>Employees</u>			
Sake	1,250 <sup>a/</sup>	11,757	
Imitation sake	2,231	1,539	
Shochu	1,605	2,971	
Others	<u>2,042</u>	<u>1,256</u>	
Total	7,128	17,523	

<sup>a/</sup> Maintenance and repair work.

SOURCE: Ministry of Finance.

### Confectionery Products

39. December production consisted largely of sweet potato confections. Continued shortages of wheat flour and sugar held production to about four percent of capacity for the industry.

#### CONFECTIONERY INDUSTRIES November 1945-January 1946

	<u>November</u>	<u>December</u>	<u>January (Estimated)</u>
Production (metric tons)	1,622	1,908	1,678
Plants in operation	495	595	--
Employees	30,499	26,788	--

SOURCE: Ministry of Agriculture and Forestry.

### Dairy Products

40. Shortage of fresh milk kept December production of condensed milk and butter at 14 percent of existing capacity and powdered milk at 55 percent. Cattle fodder is still lacking and civilian demand for fresh milk in producing areas continues to be heavy.

#### DAIRY PRODUCTS November 1945-January 1946 (metric tons)

	<u>November</u>	<u>December</u>	<u>January (Estimated)</u>
<u>Production</u>			
Condensed milk	247	258	209
Powdered milk	426	395	345
Butter	175	70	154
<u>Factories in operation</u>			
Condensed and powdered milk	52	51	--
Butter	97	97	--
<u>Employees</u>			
Condensed and powdered milk	1,522	1,500	--
Butter	525	390	--

SOURCE: Ministry of Agriculture and Forestry.

### CHEMICAL INDUSTRIES

41. Production of basic heavy chemicals averaged about 19 percent of present plant capacities or approximately 14 percent of calculated minimum requirements. Causes were shortages of coal, raw materials (especially salt) and labor, the uncertainty of the effect of reparations and unstable price structure.

It is estimated that chemical production will continue at about the present level until Spring when an increase is expected.

### Fertilizers

42. Although the production of fertilizer is nearer its

capacity than any other heavy chemical it is far below minimum requirements. Increasingly accurate data indicate that Japanese estimates have been optimistic.

Field inspections by SCAP personnel disclosed that the Japanese were rehabilitating certain large plants.

#### Salt

43. Production of critically needed salt continued to be limited by the coal shortage, seasonal restrictions and effects of the typhoon damage. Production was about 12 percent of the 108,000 metric tons considered to be the minimum monthly requirement for food and industry.

Industrial users are operating on existing stock piles supplemented in some cases by small amounts produced within the user's plant.

#### Soda Industry

44. Only one of four Solvay Process plants was in operation. Production had been restricted by lack of coal and salt and by an unfavorable price for the product. A recent increase in this price from ¥ 1,000 to ¥ 5,000 per metric ton is expected to bring all plants into partial operation. Caustic soda production, particularly by the electrolytic process, is very low.

#### Other Products and Production Rates

45. The production of coke by-products was negligible. The small coal allocations were used for heating the coke ovens in order to prevent the serious damage which would result from complete shut-downs.

Ethyl alcohol, which is made by fermentation of critically needed foods such as sweet potatoes and corn, is being produced in quantities nearly sufficient to meet immediate medicinal and industrial needs.

#### CHEMICAL MANUFACTURE

December 1945

<u>Product</u>	<u>December Production</u> (metric tons)	<u>Percent of Present Capacity</u>	<u>Percent of Minimum Requirements</u>
Soda ash	25,500	8	6
Caustic soda	15,300	4	6
Total chlorine	13,600	5	15
Salt	154,000	21	12
Benzene	2,760	5	18
Toluene	144	2	5
Dyestuffs	217	0.6	1
Ammonium sulfate	185,000	36	13
Calcium cyanamide	114,000	50	30
Sulfuric acid (100%) (contact)	48,000	6	8
Sulfuric acid (62.5%) (chamber)	156,000	20	20
Hydrochloric acid	4,030	2	4
Bleaching powder	3,370	2	7
Liquid chlorine	1,418	3	14
Ethanol	27,500 (kiloliters)	14	66

SOURCE: Ministry of Commerce and Industry.

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TRANSPORTATION EQUIPMENT

Motor Vehicles

46. The automobile industry must now depend solely upon civilian demand since the loss of its greatest customer, the military, which formerly took 85 percent of its output.

47. The sale prices of truck chassis have increased because of increased unit costs which result from low production, higher wages and scarcity of raw materials and fuel. The price trend and cost calculation of truck chassis are indicated below.

TRUCK CHASSIS PRICE <sup>a/</sup>  
October 1940-November 1945  
(yen)

<u>Date</u>	<u>Toyota</u>	<u>Nissan</u>	<u>Diesel</u>
Oct 1940	3,409	4,082	-
Dec 1940	-	-	5,500
Mar 1941	4,000	4,300	-
May 1941	-	-	6,200
Dec 1941	4,100	4,400	-
Sep 1942	4,720	4,770	-
Oct 1943	5,350	5,350	-
Jul 1943	-	-	6,650
Jun 1944	6,500	6,500	8,100
May 1945	12,000	12,000	14,500
Sep 1945	23,000	-	-
Nov 1945	22,000	23,000	25,500

<sup>a/</sup> Price at factory (without cab and body).

SOURCE: Automobile Control Association.

COST CALCULATION OF TRUCK CHASSIS  
1 November 1945  
(yen)

<u>Items</u>	<u>Toyota</u>	<u>Nissan</u>	<u>Diesel</u>
Materials	7,792	7,390	11,564
Labor	827	1,260	510
Indirect expense	<u>10,131</u>	<u>10,990</u>	<u>10,707</u>
Total factory cost	18,750	19,640	22,781
Administration expense	<u>878</u>	<u>547</u>	<u>1,819</u>
Total cost	19,628	20,187	24,600
Profit (incl. int.)	<u>2,748</u>	<u>7,436</u>	<u>4,503</u>
Gross total	22,376	27,623	29,103
Price	22,000	23,000	25,500

SOURCE: Automobile Control Association.

48. Present estimated production of Toyota, Nissan and Diesel truck chassis for the January-March 1946 quarter is about one-half of that previously estimated. Under current operating conditions doubt exists as to the ability of the automobile industry to approach even the new forecasted quota.

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PROPOSED PRODUCTION OF TRUCK CHASSIS  
January-March 1946

<u>Maker</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Total</u>
<u>Previous Forecast a/</u>				
Toyota	450	500	650	1,600
Nissan	300	500	700	1,500
Diesel	<u>150</u>	<u>150</u>	<u>150</u>	<u>450</u>
Total	900	1,150	1,500	3,550
<u>Present Forecast b/</u>				
Toyota	100	300	400	800
Nissan	150	200	300	650
Diesel	<u>30</u>	<u>70</u>	<u>120</u>	<u>220</u>
Total	280	570	820	1,670

a/ Submitted in December 1945.

b/ Submitted in January 1946.

SOURCE: Automobile Association.

ACTUAL PRODUCTION OF TRACTORS  
October-December 1945

<u>Maker</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
Hino Jukogyo	0	0	0	0
Ikegai Jidosya	0	0	0	0
Mitsubishi Jukogyo (Tokyo Kiki)	0	0	0	0
Kubota Tekko	0	0	10	10
Kanagafuchi Diesel	5	7	8	20
Kato Seisakusyo	0	0	0	0
Komatsu Seisakusyo	0	0	10	10
Kobe Seikosyo	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	5	7	28	40

SOURCE: Automobile Association.

TRACTOR PRODUCTION PLANS  
January-March 1946 a/

<u>Maker</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Total</u>	<u>Description</u>
Hino Jukogyo	0	0	0	0	
Ikegai Jidosya	0	0	5	5	3 ton
Mitsubishi Jukogyo (Tokyo Kiki)	0	0	30	30	3 ton
Kubota Tekko	10	15	20	45	8 ton
Kanagafuchi Diesel	10	10	15	35	10 ton
Kato Seisakusyo	5	30	40	75	4 ton
Komatsu Seisakusyo	25	40	45	110	G-40 type
Kobe Seikosyo	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total	50	95	155	300	

a/ Last quarter of fiscal year.

SOURCE: Automobile Association.

**PROPOSED PRODUCTION OF BATTERY CARS**  
January-March 1946 <sup>a/</sup>

<u>Maker</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Total</u>
Eihondenki	30	30	40	100
Nakajima	<u>10</u>	<u>20</u>	<u>20</u>	<u>50</u>
Total	40	50	60	150

<sup>a/</sup> Last quarter of fiscal year.

SOURCE: Automobile Association.

**PROPOSED PRODUCTION OF  
THREE WHEEL MOTOR CARS AND MOTORCYCLES**  
January-March 1946 <sup>a/</sup>

<u>Maker</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Total</u>	<u>Description</u>
Hatsudoki Seizo	70	100	150	320	3 wheel
Toyo Kogyo	30	60	60	170	3 wheel
Nihon Hainenki	0	0	0	0	
Riyuo Hainenki	0	30	50	80	3 wheel
Teikoku Seiki	0	0	20	20	3 wheel
Miyata Seisakusho	<u>0</u>	<u>0</u>	<u>15</u>	<u>15</u>	Motorcycle
Total	100	190	315	605	

<sup>a/</sup> Last quarter of fiscal year.

SOURCE: Automobile Association.

49. The Ministry of Home Affairs is making an investigation to determine the present total number of motor vehicles in Japan by type, make and age which are actually in use and those capable of use or repair. The Automobile Bureau of the Ministry of Transportation is currently investigating by radio and press the probable future public demand for automobiles in all categories.

The purpose of these studies is to determine the potential market for automobiles within Japan.

Railway Rolling Stock

50. The recovery of both government and private railway systems is affected by coal and material shortages, failure to recover from the post-surrender apathy and lack of certain skilled workers.

51. During December four steam locomotives, five passenger cars and 225 freight cars were constructed for government-owned railways.

Shipbuilding

52. In August 1945 there were 123 steel ships of 373,030 gross tons under construction, of which 49 (totalling 141,170 gross tons) had been launched. From 15 August 1945 to 15 January 1946 nine ships aggregating 16,970 gross tons were launched and 13 ships aggregating 41,000 gross tons were completed. There are 13 major shipyards operating on a 24 hour per day basis, while eight are operating 16 hours per day and others from nine to 12 hours per day. The ship-

yards are still handicapped by shortage of labor, damaged equipment and mined harbors and approaches to docks.

53. Construction of wooden ships is being hampered by the lack of wood of the proper quality. Most of this wood was normally imported. From 15 August 1945 to 15 January 1946 20 wooden ships aggregating 3,700 gross tons were launched and 28 wooden ships aggregating 5,850 gross tons were completed.

#### TEXTILE INDUSTRY

##### General

54. Textile production figures, though showing an increase in some phases, were still very low and some textile manufacturing came almost to a standstill.

#### SPINNING PRODUCTION November-December 1945 (thousands of pounds)

<u>Yarn Classification</u>	<u>November</u>	<u>December</u>
Cotton and mixtures		
Pure cotton yarn	1,533	1,595
Mixed	62	238
Staple fiber yarn	408	461
Others	<u>665</u>	<u>660</u>
Total	2,668	2,954
Silk and rayon		
Spun silk	97	57
Staple fiber and silk	—	—
Mixed	7	8
Noil	38	34
Rayon pulp	515	84
Rayon	292	277
Staple fiber (not spun)	<u>1,234</u>	<u>1,063</u>
Total	2,183	1,523
Woolen and worsted		
Worsted	166	252
Woolen	<u>911</u>	<u>1,168</u>
Total	1,077	1,420
Hard fibers		
Jute	232	94
Flax )		
China grass)	87	461
Rope	4,373	2,640
Cord	470	278
Fish net twine	<u>16</u>	<u>15</u>
Total	5,178	3,488

SOURCE: Japan Textile Association.

WEAVING PRODUCTION  
November-December 1945  
(thousands of square yards)

<u>Fiber or Product</u>	<u>November</u>	<u>December</u>
Throstle spun yarn a/ Worsted)	348	184
Woolen )	1,351	36
		348
Flax and hemp	33	291
Cotton	4,999	3,305
Rayon	2,240	2,816
Silk (spun and raw)	3,684	4,397
Staple fiber	1,944	6,054
Regenerated b/	265	284
<b>Total</b>	<b>14,864</b>	<b>17,715</b>

- a/ Throstle spun yarn is made largely from waste flax, ramie and cotton.  
b/ Regenerated yarns are made from waste cotton, flax, ramie and wool fibers. These yarns are used as substitutes for cotton yarn.

SOURCE: Japan Textile Association.

MANUFACTURED GOODS PRODUCTION  
November-December 1945

<u>Product</u>	<u>Unit</u>	<u>November</u>	<u>December</u>
Undershirts	doz	17,795	57,625
Stockings	doz pr	80,243	204,656
Gloves	doz pr	56,632	101,458
Sewing thread			
Silk	lbs	24,736	27,729
Cotton	lbs	437,301	134,556
Rayon	lbs	3,700	11,000
Ready-made clothing			
Working clothing	pcs	242,619	7,998,579
Street and house clothing	pcs	49,188	245,449
Kimonos	pcs	167,335	92,737
Underwear, shirts, etc.	pcs	666,068	2,945,998
Secondary school uniforms	pcs	142,561	-
Footwear	pr	2,622,127	1,690,506
Fish netting			
Cotton	lbs	88,657	89,312
Manila hemp	lbs	9,517	-
Silk	lbs	174	370
Sundry goods (lace, tape, etc.)	lbs	1,059,783	2,015,752

SOURCE: Japan Textile Association.

MILL STOCK  
November-December 1945  
(thousands of pounds)

<u>Fiber</u>	<u>November</u>	<u>December</u>
Pure cotton	13,200	10,861
Staple fiber <u>a/</u>	3,951	4,078
Rayon pulp )	7,762	
Rayon )		22,785
Staple fiber <u>b/</u>	9,956	9,997
Spun silk	11,594	712
Worsted	657 <u>c/</u>	923 <u>c/</u>
Woolen	823 <u>c/</u>	1,106 <u>c/</u>
Jute	1,442	1,578
China grass	4,552	6,878
Flax	3,531	5,388
Rope	801	800
Other hard fibers	2,375	4,703

a/ At the cotton mill.

b/ At the rayon plant.

c/ Includes stock on the market.

SOURCE: Japan Textile Association.

YARN STOCKS  
November-December 1945  
(thousands of pounds)

	<u>Yarn in Mill</u>		<u>Yarn on Market</u>	
	<u>November</u>	<u>December</u>	<u>November</u>	<u>December</u>
Cotton and mixtures				
Pure cotton	6,138	6,677	3,278	3,110
Mixed (1/3 staple fiber)	1,056	954	728	804
Mixed (1/2 staple fiber)	160	84	2	2
Staple fiber	1,925	1,985	1,287	26
Others	2,544	1,643	252	118
Silk and rayon				
Spun silk	423	449	1	1
Mixed	99	34	7	7
Noil	343	189	-	-
Woolen and worsted				
Worsted <u>a/</u>	-	-	-	-
Woolen <u>a/</u>	-	-	-	-
Hard fibers				
Jute	3,204	265	-	-
China grass )	2,232	1,208	-	-
Flax )	1,027	2,254	-	-
Rope			-	-

a/ Included in preceding table (MILL STOCK) because the association's stocks were intermingled.

SOURCE: Japan Textile Association.

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Raw Silk

55. Reeling capacity is inadequate and at least 20,000 additional basins, including 3,655 which are restorable, will be needed to handle the 1946 cocoon production estimated at 23,000,000 kin (one kin equals 1.3 pounds). This is sufficient to produce about 190,000 bales of raw silk. Other shortages were food for workers and coal for use in boiling cocoons.

**SILK REELING INDUSTRY**

	<u>Factories</u>	<u>Basins (Multiple-thread)</u>
Peak capacity (1929)	3,719	251,520
Pre-war capacity (1941)	1,027	150,845
War damaged or scrapped	867	129,045
In operation	160	21,800

SOURCE: Ministry of Commerce and Industry.

56. Estimated silk reeling production was revised downward as shown by the following plan submitted during January 1946:

**RAW SILK REELING CAPACITY AND MONTHLY FORECAST**  
June 1945-May 1947

	<u>Increase in Basins</u>	<u>Basins in Operation</u>	<u>Percent of a/ Operation</u>	<u>Factories in Operation</u>	<u>Bales Produced</u>
Jun 45	-	24,084	64.9	175	5,542
Jul 45	-	22,889	65.2	165	7,854
Aug 45	-	22,673	65.4	163	6,629
Sep 45	-	21,800	70.0	160	7,301
Oct 45	-	21,800	70.0	160	7,136
Nov 45	-	21,800	70.0	160	5,660
Dec 45	-	21,800	70.0	160	5,220
Jan 46	355	21,800	70.0	160	2,270
Feb 46	1,560	22,155	70.0	162	5,305
Mar 46	3,598	23,715	70.0	170	6,173
Apr 46	2,433	27,315	70.0	188	7,110
May 46	2,776	29,746	75.0	198	8,628
<b>Total for 1945 silk year</b>				<b>74,898 bales</b>	
<b>Previous report</b>				<b>83,172 bales b/</b>	
Jun 46	1,556	32,522	70.0	204	7,787
Jul 46	1,450	34,076	75.0	215	12,076
Aug 46	1,400	35,528	75.0	225	12,500
Sep 46	1,650	36,928	85.0	235	14,831
Oct 46	1,650	38,578	85.0	245	15,494
Nov 46	1,200	40,228	85.0	255	16,157
Dec 46	1,516	41,428	70.0	260	11,672
<b>Total for 1946 calendar year</b>				<b>120,093 bales</b>	
<b>Previous report</b>				<b>133,940 bales b/</b>	

	<u>Increase in Basins</u>	<u>Basins in Operation a/</u>	<u>Percent of Operation</u>	<u>Factories in Operation</u>	<u>Bales Produced</u>
Jan 47	-	42,944	70.0	269	10,521
Feb 47	-	42,944	70.0	269	12,099
Mar 47	-	42,944	80.0	269	13,527
Apr 47	-	42,944	80.0	269	14,067
May 47	-	42,944	80.0	269	14,609

Total for 1946 silk year  
Previous report

155,430 bales  
177,890 bales b/

a/ Multi-thread basins.

b/ Report submitted during December 1945.

SOURCE: Ministry of Commerce and Industry.

57. The monthly report of the raw silk industry discloses that January production was about 50 percent below that of the previous month. This was attributed to the long New Year holiday.

MONTHLY REPORT ON RAW SILK  
January 1946

<u>Item</u>	<u>Dec 45</u>	<u>Jan 46</u>	<u>Feb 46 (Estimated)</u>
Reeling basins in operation	21,800	21,800	21,800
Reeling plants in operation	160	160	160
Raw silk produced (bales)	5,220	2,270	5,305
Short fiber machines in operation	2,025	-	-
Short fiber plants in operation	35	-	-
Short fiber produced (1,000 pounds)	500	-	-
Cocoons on hand, end of month (1,000 pounds)	101,300	97,150	90,150
Raw silk inspected and re-checked for export (bales)	4,500	8,800	14,000

SOURCE: Ministry of Commerce and Industry.

Knitting and Hosiery

58. Production of knitted undershirts, stockings and gloves increased in December but the industry was operating at only 10 percent of capacity. This was primarily due to shortages of cotton and other raw materials. There is a continued scarcity of skilled labor, spare parts and knitting needles.

The stress on heavyweight materials in recent years led to the scrapping of most fine gauge machines and no new machines have been installed by the industry since 1938.

In December all knitted items showed an increase in production over November's output.

Rayon and Staple Fiber

59. December rayon production of 277,000 pounds was only 3.6 percent of present capacity due largely to a scarcity of caustic soda, pulp and coal.

Staple fiber production for December was 500 short tons or about five percent of existing capacity.



According to the Japan Textile Association the following principal materials, expressed in metric tons, are needed to bring present equipment into full operation: 65,000 of rayon pulp, 729,000 of coal, 47,000 of caustic soda, 102,000 of salt, 17,000 of carbon disulfide and 57,000 of sulfuric acid.

60. When full production is achieved the annual fabric output will approximate 336,000,000 square yards.

#### Wool

61. On the basis of information now available it is indicated that in September 1945 raw wool totalled 174,060 bales (300 pounds per bale). About 4,650 bales were used during the remainder of 1945 leaving about 169,410 bales as of 1 January 1946

It is estimated that approximately 400,000 bales can be consumed during the current year. The stock on hand of 169,410 bales plus an estimated annual production of 3,500 bales will leave a deficit of approximately 227,000 bales of raw wool to be imported to supply the need in 1946.

#### Cotton

62. In former years cotton spinning was a major industry with yearly production of 1,000,000 short tons, about half of which was exported as finished goods. Current yearly capacity is about 350,000 short tons. Actual rate of production is dependent upon the availability of raw materials which has led to application for imports sufficient to maintain the current output. The industry is further hampered by labor unrest, lack of working capital, scarcity of good equipment and the inflationary economy.

63. The current domestic demand for cotton fabrics is high, while domestic stock piles are being depleted rapidly.

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OTHER MANUFACTURING

C O N T E N T S

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Optical Glass and Optical Instruments

64. Optical glass is not being produced because of the extensive stock on hand. This stock is mostly high dispersion glass. During the next two years an additional five to 10 metric tons of special low dispersion glass will be needed for civilian instruments.

65. The production of cameras and binoculars to meet the demand for sales through the Army Exchange Services continues.

66. The Japan Optical Industrial Co., Ltd., which produces about half of the optical instruments in Japan, reported the following production for November and December 1945:

BINOCULAR PRODUCTION  
November and December 1945

<u>Month</u>	<u>Quantity</u>	<u>Value (yen)</u>
November	734	132,420
December	195	54,430

The large production for November resulted from the completion of semi-finished binoculars in stock.

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Sheet Glass

67. The trend of window glass production and consumption is outlined in the following table:

WINDOW GLASS STATISTICS  
1936-1945  
(cases) a/

<u>Year</u>	<u>Production</u>	<u>Domestic Consumption</u>
1936	3,936,662	3,663,662
1937	4,689,574	4,360,574
1938	3,899,808	3,660,808
1939	3,778,978	3,349,978
1940	4,648,220	4,263,220
1941	3,685,183	3,288,183
1942	2,877,879	2,837,879
1943	2,450,237	2,450,237
1944	883,809	883,809
1945	292,662	62,925

a/ Case - 100 square feet.

SOURCE: Ministry of Commerce and Industry.  
Japan Sheet Glass Control Association.

68. Only one of Japan's five sheet glass factories was active in January 1946. One plant which operated in December was forced to suspend production for lack of coal.

Present estimated capacity of the industry is 150,000 cases per month as compared to a monthly potential of 500,000 cases. Production since the beginning of the occupation was:

SHEET GLASS PRODUCTION  
September 1945-January 1946  
(cases) a/

<u>Month</u>	<u>Amagasaki Plant</u>	<u>Futashima Plant</u>
September 1945	-	8,145
October 1945	-	30,850
November 1945	11,583	29,926
December 1945	15,000	30,000
January 1946	15,000	-

a/ Case - 100 square feet.

SOURCE: Japan Sheet Glass Control Association.

Glassware

69. In 1938 Japan had 1,060 factories with a combined yearly production capacity of 506,400 metric tons. In order to conserve raw materials and meet essential production quotas the plants were rearranged in 1941 and 1943 and their number reduced to 180 with a total yearly capacity of 156,300 metric tons.

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Present average monthly production is 1,500 metric tons as compared to an estimated 1946 market of 181,000 metric tons including 150,000 metric tons of bottles and containers.

Only three of the 40 bottle and container plants are in operation. Other products being produced on a limited scale include electric bulbs, items for signal lamps and medical and household ware.

#### Ceramics

70. Some of the small porcelain and chinaware plants are using wood fuel and making low-fire domestic ware. The majority of the 2,500 plants is undergoing repair and collecting raw materials and fuel with the expectation of resuming operations in the Spring. The larger plants are seeking contracts for manufacture of souvenirs and necessary items such as sanitary ware and hotel chinaware.

#### Brick

71. Forty-eight of the 362 brick factories employ upwards of 30 workers each. As of 31 December 6,425 persons were employed in all active plants. Present production figures are not yet available but the All-Japan Brick Industry Control Union estimates that 300,000,000 bricks could be made in 1946 against an estimated domestic demand for more than 380,000,000 bricks. The market price per brick has risen from ¥ 0.035 to ¥ 0.30 since 1940.

#### Roofing Tile

72. This industry is composed of a large number of small factories widely scattered throughout Japan. The capacity of the industry in 1941 was about 400,000,000 pieces per year. Estimated 1946 requirement is 300,000,000 pieces. Production declined in recent years due to a shortage of fuel which is consumed at the rate of one metric ton of coal and three metric tons of wood per 1,000 pieces.

#### ROOFING TILE INDUSTRY 1942-1946

<u>Year</u>	<u>Number of Plants</u>	<u>Number of Workers</u>	<u>Production</u>	
			<u>Pieces</u>	<u>Value (yen)</u>
1942	7,658	30,918	387,000,000	48,375,000
1943	7,459	25,608	303,000,000	60,600,000
1944	7,257	18,919	152,500,000	53,375,000
1945	6,905	15,264	71,280,000	35,640,000
1946 (est.)	-	-	59,601,000	80,641,000

Domestic requirement for 1946 - 300,000,000 pieces.

SOURCE: The All-Japan Clay-Tile Controlling Association.

#### Vitreous Enamel

73. The present production of enamelware is confined to household items. In former years Japan produced kitchenware, sanitary ware, chemical ware and signs for domestic use and export. In recent years the production of such items was limited by the shortage of iron.

0123

There are 29 enamelware plants in Japan of which 19 are either in operation or preparing to begin operations. The remaining 10 plants were damaged during air raids and are now being re-stored and preliminary plans indicate production in the latter part of 1946.

74. The Nippon Enamel Ironware Control Union estimates that 20,280 metric tons of enamelware will be manufactured during 1946, of which about 30 percent would be available for export. This production would require 101,400 metric tons of coal. Estimated 1946 production is 25,050,000 wash basins, 33,500,000 cooking dishes, 2,012,000 tea pots, 1,780,000 lunch boxes and 848,000 rice boilers.

#### Refractory Industry

75. The refractory industry is now operating on a small scale. The Ministry of Commerce and Industry reported that on 15 January 1946 162 plants were in operation employing 10,794 workers. Capacity of the industry is about 118,500 metric tons per month.

#### REFRACTORY PRODUCTION October-December 1945 (metric tons)

	<u>October</u>	<u>November</u>	<u>December</u>
Fire clay	9,129	9,810	10,491
High alumina	402	434	390
Silica	2,921	1,666	1,549
Chrome	89	33	25
Magnesia	332	170	38
Forsterite	-	-	-
Corhart black	-	-	18
Corhart white	-	-	22
Total	12,873	12,113	12,523

SOURCE: Ministry of Commerce and Industry.

#### Handicraft Industries

76. The various handicraft industries are so numerous and scattered that it is difficult to assemble accurate data.

77. The manufacture of shippo or cloisonne requires three to six months. The Occupation Forces in the areas of production are purchasing this item almost as quickly as made.

Recent summaries by the Board of Trade of the Ministry of Commerce and Industry indicate a potential annual production of shippo and lacquer ware of over ¥ 70,000,000 provided that approximately 191,085 kilograms of lacquer, 2,082,640 grams of gold and 2,655,783 grams of silver are available. The exact quantities of these items in the hands of the manufacturers are unknown.

Recently lacquer was found in large quantities at a former aircraft factory and is being released by the Occupation Authorities for the manufacture of lacquered wares for sale in Army exchanges throughout Japan.

78. Wajima lacquer ware, a product of Ishikawa Prefecture, is scheduled for a sizable increase in output. The expected annual production, as reported by the Asahi Shimbun (Osaka), may reach ¥ 80,000,000, or 10 times the prewar yen valuation. This estimate appears optimistic in view of the limited stocks of fuel and precious metals anticipated for release.

Pulp and Paper

79. The gradual decline in pulp production was attributed primarily to the decrease in coal allotments to the industry.

PRODUCTION OF PULP  
October-December 1945 a/  
(short tons)

	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
Rayon pulp	701	262	43	1,006
Chemical pulp	5,980	5,727	5,075	16,782
Mechanical pulp	<u>13,978</u>	<u>13,662</u>	<u>8,659</u>	<u>36,299</u>
Total	20,659	19,651	13,777	54,087

a/ Third quarter of fiscal year.

SOURCE: Oji Paper Company.

The production of various types of papers for December 1945:

PAPER PRODUCTION  
December 1945  
(short tons)

<u>Kind</u>	<u>Quantity</u>
Foreign style paper	
News print	5,048 <u>a/</u>
Paper board	2,414 <u>b/</u>
Printing paper )	
Writing and drawing paper )	
Coated paper )	6,160 <u>b/</u>
Wrapping paper )	
Cigarette paper )	
Sub-total	13,622
Japanese style paper	
Machine-made	1,389 <u>b/</u>
Hand-made	<u>116 b/</u>
Sub-total	1,505
Grand total	15,127

a/ All produced by Oji Paper Company.

b/ Total from estimates submitted by various manufacturers.

SOURCE: Oji Paper Company.

Candle Industry

80. The major candle manufacturing companies suffered practically no damage during the war. The number of workmen averaged 645 in 1941 and 458 in 1945. The trend of production has been sharply downward since the peak year of 1940 because of the shortage

of basic raw materials.

CANDLE PRODUCTION  
1930-1945  
(pounds)

Year	Basic Components		Total
	Stearic Acid	Paraffin	
1930	3,016,121	12,064,484	15,080,605
1931	3,592,090	10,776,268	14,368,358
1932	5,351,514	12,486,868	17,838,382
1933	8,712,187	16,179,780	24,891,967
1934	7,467,859	10,650,940	18,118,799
1935	8,525,409	10,419,945	18,945,354
1936	12,742,584	11,762,389	24,504,973
1937	16,436,780	12,969,683	29,406,463
1938	19,525,293	18,136,211	37,661,504
1939	17,965,621	15,912,763	33,878,384
1940	23,902,380	19,556,092	43,458,472
1941	16,199,400	16,860,600	33,060,000
1942	14,149,680	12,593,656	26,743,336
1943	5,064,792	9,470,588	14,535,380
1944	2,049,720	2,093,800	4,143,520
1945	551,000	506,920	1,057,920

SOURCE: Nippon Candle Control Association.

The Japanese Government has allotted the majority of candles to prefectures where electricity is scarce or thermal operation of electric plants is reduced.

Match Industry

81. Of the former 68 major pre-war match manufacturers, only 34 remain. Fourteen of the largest plants were destroyed by fire incident to bombing raids and 20 have abandoned production. Some of the latter concerns are rebuilding their plants in anticipation of an early resumption of manufacture.

Exclusive of home production the industry in 1941 employed an average of 4,657 persons as compared to 1,683 persons in 1945.

82. The following table discloses a downward production trend in recent years.

MATCH PRODUCTION AND  
PARAFFIN CONSUMED BY MATCH INDUSTRY  
1930-1945

Year	Product (match ton) a/	Paraffin (pounds)	Year	Product (match ton) a/	Paraffin (pounds)
1930	429,127	3,862,143	1938	441,004	3,969,036
1931	400,945	3,608,505	1939	423,823	3,814,407
1932	397,405	3,576,645	1940	428,739	3,840,651
1933	473,577	4,262,193	1941	414,919	3,734,271
1934	501,986	4,517,874	1942	355,974	3,203,766
1935	526,701	4,740,309	1943	250,381	2,253,429
1936	495,639	4,460,751	1944	187,421	1,686,789
1937	456,416	4,107,744	1945	99,016	891,144

a/ A match ton is 600 small boxes of matches.

SOURCE: The Match Control Company, Ltd.

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### Containers

83. The use of containers such as cans, bottles, paper cartons and boxes is less widespread than in the United States. The use of standardized fiber cartons and fancy packages is largely confined to the urban areas. Most commodities are transported in crude boxes, rice-straw bags or casks.

In 1939 about 14,854,000 cases of tin cans (48 cans per case) were manufactured as compared to present production capacity of 12,500,000 cases.

Production of tin cans is confined to six plants which are operated by two companies. Estimated present investment is ¥ 112,000,000. Automatic can-making machines of foreign design are employed in three of the plants while Japanese made machines, modelled after American equipment, are used in the other three plants.

At present five factories are in limited production. The program for 1946 calls for the manufacture of 2,640,000 cases of cans requiring 12,600 metric tons of tin plate. Of this total, 840,000 cases are to be used for condensed and powdered milk, while 1,800,000 cases are to be used for canning agricultural and marine products.

84. The manufacture of paper containers is carried on by one company, the Tayo Seikan Company, which is also the chief producer of tin cans. Many types of containers are manufactured varying in size from 15 mm. to 220 mm. in diameter and 95 mm. to one meter in length. Six plants, representing a present estimated investment of ¥ 10,735,000 and using American equipment, are engaged in the manufacture of these items. Annual production capacity is 6,451,200 pounds of paper containers. In 1946 the manufacture of 1,881,600 pounds of containers is planned.

85. Glass containers manufactured in Japan include bottles for beer, liquor, soft drinks, soy sauce, milk, ink, medicines and mayonnaise. Glass food containers with vacuum seal caps are also manufactured.

There are 40 glass container factories, representing an estimated present investment of ¥ 60,000,000 and possessing an annual productive capacity of about 132,000 metric tons. The industry suffered 30 percent war damage. Equipment in many of the plants is modern and includes about 100 American automatic bottle making machines. At present there is limited production due to shortage of raw materials and fuel.

### Oils and Fats

86. In former years the production of vegetable and fish oils and fats was a large scale industry. Over ¥ 100,000,000 is now invested in 325 vegetable oil factories and in 6,306 fish and chrysalis oil plants.

The vegetable oil plants are generally fairly large and only eight percent are classified as small household factories. Fish oil plants are generally small, crude plants with 35 percent classified as household factories.

The present production capacity expressed in metric tons is 673,634 of vegetable oils (from various seeds), 26,928 of fish oils and 8,834 of chrysalis oils, according to the Ministry of Agriculture and Forestry.



Production reached a peak in 1939 when 247,758 metric tons of vegetable oils and 84,363 metric tons of fish and chrysalis oils were produced. Domestic production of both vegetable and fish oils for 1945 totalled 27,925 metric tons.

In former years the great bulk of raw materials for vegetable oils was imported. Now that this trade is cut off the industry is largely inoperative. The Japanese estimate that the total amount of oils and fats which could be produced with domestic raw materials would meet only six percent of the domestic demand.

#### Leather

87. During the war no civilian shoes or boots were manufactured as all leather was confined to military uses. It is estimated that the total 1945 quota will be 6,000,000 pairs of shoes and boots. Recent release of 20,000 metric tons of former Army and Navy leather stocks would be sufficient to meet the quota. After this initial distribution it is expected the needs will be lessened and it is planned to manufacture 3,000,000 pairs in 1947 and yearly thereafter.

Officials of the Oil and Chemical Bureau of the Ministry of Commerce and Industry estimate that production based on the above rates will be sufficient to meet the domestic requirements.

It is estimated that the manufacture of the 6,000,000 pairs of boots and shoes would require 7,800 metric tons of leather. A small additional quantity would be needed to manufacture harnesses, knapsacks, saddles, belts and gloves.

#### Electrical Goods

88. The electrical equipment manufacturing industry remains unstable. Progress is slow although there are evidences of improvement. The economic condition of the country as a whole hampers rapid reactivation of this industry.

It is estimated that 40 percent of the labor employed in the industry is ineffective due to absenteeism.

89. Labor is passing through the initial stages of union organization. The demonstrations, mass meetings and negotiations incident to such organization and recognition have reduced the output of the plants. Many of the companies have completed negotiations with labor and it is anticipated that this factor may soon be reduced. The Tokyo-Shibaura-Denki Company is reported to have satisfied the principal demand of its labor union by agreeing to an increase of five times the wages prevailing at the time of the surrender. This concern is one of the largest and such an example may have significant influence on the industry as a whole.

90. Special effort is being directed toward the manufacture of transformers through pressure from the electric power distribution companies and government agencies. Demand for transformers is high due to the sudden increased use of electricity for domestic cooking and heating since the end of the war. The existing distribution transformers are failing under heavy overloads.

91. Some improvement in the rate of manufacture of certain items of electrical equipment is shown in the following table. The upward trend should continue in the future months as conditions

become more stable. An estimate of the quantity of production of various electrical items for the months of January and February is also shown. This is based on present stocks of raw materials and estimated ability to manufacture. The Ministry of Commerce and Industry is preparing a survey of raw materials available for electrical equipment manufacture.

**PRODUCTION OF ELECTRICAL EQUIPMENT**  
October 1945-February 1946  
(thousands)

<u>Description</u>	<u>Actual Production</u>			<u>Estimated Production</u>	
	<u>Oct 45</u>	<u>Nov 45</u>	<u>Dec 45</u>	<u>Jan 46</u>	<u>Feb 46</u>
Illuminating apparatus a/	220	270	260	200	280
Dry batteries	2,000	2,000	2,000	1,500	2,000
Storage batteries	7	10	15	18	20
Heaters	0	0.5	1	3	3
<b>Transformers</b>					
10 KVA-100 KVA	1	2	2	2	2
Motors under 50 H.P.	1	3	2.8	3	3
Electric light bulbs	620	900	700	700	1,000
Wiring accessories b/	340	730	1,000	1,270	1,410

a/ Illuminating apparatus includes: reflectors, lamp stands, flashlights, etc.

b/ Wiring accessories includes: receptacles, sockets, plugs, switches, etc.

SOURCE: Ministry of Commerce and Industry.

92. Many household appliances of the type that can be produced with few tools and by bench assembly methods are being manufactured by certain operators for sale in the black market. Such activity results in high profits and causes many materials to be diverted from legitimate manufacturers who sell within the ceiling prices.

93. Rebuilding of plant facilities damaged by air raids has been hampered by lack of construction materials. Where reconstruction and manufacturing needs for raw materials are in conflict reconstruction is usually neglected or postponed.

**CONSTRUCTION**

94. The Reconstruction Bureau of the Ministry of Home Affairs reported the formulation of the Home Construction Allotment Plan completed on 27 December 1945. This plan calls for the construction throughout Japan of 500,000 houses annually for the next five years.

**HOUSE CONSTRUCTION ALLOTMENT**

<u>Builder</u>	<u>City Homes</u>		<u>Country Homes</u>	
	<u>Ordinary Homes</u>	<u>Apartments</u>	<u>Farm Homes</u>	<u>Tenant Homes</u>
Housing Corp.	25,000	10,000	0	5,000
Contractors	45,000	10,000	0	20,000
Renters	20,000	5,000	0	0
Real Estate Co.	10,000	20,000	0	0
Government	20,000	0	0	0
Private owners	135,000	0	15,000	110,000
Farm Association	0	0	0	20,000
Agricultural Assn.	0	0	0	30,000
<b>Total</b>	<b>255,000</b>	<b>45,000</b>	<b>15,000</b>	<b>185,000</b>

SOURCE: Ministry of Home Affairs.

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The demand for the principal building materials to implement this program for the period April 1946 to March 1947 follows:

<u>Material</u>	<u>Unit</u>	<u>Amount Required</u>
Lumber	cubic meters	7,102,000
Iron and steel	metric tons	105,000
Portland cement	metric tons	914,000
Electric wire	metric tons	1,725
Electric lights	each	3,375,000
Glass, sheet	square meters	7,661,000
Roofing materials	square meters	41,250,000
Asphalt	metric tons	24,990
Copper	metric tons	375
Lead	metric tons	660
Zinc	metric tons	18
Tin	metric tons	405
Gasoline	kiloliters	39,400
Coal <u>a/</u>	metric tons	100,000
Coke <u>a/</u>	metric tons	2,200

a/ Required for manufacturing tools.

SOURCE: Ministry of Home Affairs.

This home construction plan calls for 3,000,000,000 board feet of lumber annually. Bureau of Forestry figures show that only 2,000,000,000 board feet of lumber are being produced yearly. It is probable that other requirements listed in the above table also exceed available supplies. As a result it is very doubtful if it is possible to achieve as much as 50 percent of the desired housing.

#### HUBBER

95. Incomplete reports from the Rubber Control Union indicate that 21 December to 20 January production amounted to less than 1,150 metric tons. This decrease from December's production of 1,232 metric tons was due mainly to the New Year holiday shut-down. It is considered by the Japanese that a 20 percent decrease in production during January is to be expected.

The rubber industry was allocated 7,590 metric tons of crude rubber in October for the third fiscal quarter of 1945 and only 49 percent of this allocation was used. There will be a carry-over of 4,075 metric tons of crude rubber into the fourth quarter of the 1945 fiscal year (21 January to 20 April 1946).

#### PETROLEUM

96. As a result of the limited refinery capacity in the Akita region, wells have been shut down. To permit these wells to resume production arrangements have been made to ship their crude oil to the Niigata Refineries, a distance of 150 miles, where adequate capacity is available.

PRODUCTION OF CRUDE OIL  
(kiloliters)

<u>Oil Field</u>	<u>Dec 23-29</u>	<u>Dec 30-Jan 5</u>	<u>Jan 6-Jan 12</u>
Kashiwasaki	946.31	912.83	907.97
Akita (Teikoku Co.)	1,912.96	2,038.05	1,813.89
Yamagata	1,019.90	988.80	914.30
Hokkaido	96.95	96.95	96.95
Niigata	22.77	19.55	11.24
Akita (Daido Co.)	24.50	23.47	20.83
Niitsu	57.60	59.32	42.43
Hachimori	25.55	14.00	23.50
Total	4106.64	4,152.97	3,831.11

SOURCE: Ministry of Commerce and Industry.

97. Six refineries in the Akita and Niigata regions are in operation and one refinery in Yokohama is operating with the limited stocks on hand. This refinery will shut down as soon as these stocks are exhausted because ample refinery capacity is available in or near the indigenous crude area.

REFINED OIL PRODUCTION  
16 Dec 45-12 Jan 46  
(kiloliters)

<u>Name of Company</u>	<u>Gasoline</u>	<u>Kerosene</u>	<u>Gas Oil</u>	<u>Diesel Oil</u>	<u>Fuel Oil</u>	<u>Lubricating Oil</u>
Nippon Oil Co.,						
Kashiwasaki	1,020	289	280	170	459	249
Niigata	-	-	41	286	311	882
Akita	91	94	-	255	-	-
Yokohama	-	-	21	310	-	40
Showa Oil Co.,						
Hirasawa	-	75	14	19	-	169
Niigata	140	163	-	218	-	242
Nippon Kogyo Co.,						
Funakawa	266	109	-	398	-	-
Total	1,517	730	356	1,656	770	1,582

SOURCE: Ministry of Commerce and Industry.

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Section 4

TRANSPORTATION AND PUBLIC UTILITIES

CONTENTS

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RAIL TRANSPORTATION

1. Before the war a large part of the movement of internal freight was by coastwise shipping. Loss of ships forced rail lines to carry that coastwise shipping which could be moved by rail. This increased load was thrown on rail lines at a time when maintenance and replacement expenditures were at a minimum. The resulting strain on the railroad system is a factor contributing to the present poor physical condition of the properties.

Equipment deteriorated through wartime neglect is not being repaired with sufficient rapidity to ease shortages, particularly of electric passenger cars. Means are now being sought to utilize all available workshop capacity and to reduce the large backlog of idle rolling stock awaiting repairs.

2. Responsible officials in the Ministry of Transportation are being urged to hasten repairs. Until coal shortages and maldistribution of food and raw materials are corrected no great progress can be expected.

STATUS OF GOVERNMENT ROLLING STOCK  
31 December 1945

	Built in <u>Dec</u>	Awaiting <u>Repair</u>	In Operation <u>31 Dec 45</u>
Steam locomotives	4	1,246	4,505
Electric locomotives	0	50	242
Electric cars	0	645	1,486
Passenger cars	5	1,035	10,089
Freight cars	225	4,249	111,546

SOURCE: Ministry of Transportation.

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STATUS OF PRIVATE RAILWAY ROLLING STOCK  
31 December 1945

	<u>Built in</u> <u>Dec</u>	<u>Awaiting</u> <u>Repair</u>	<u>In Operation</u> <u>31 Dec 45</u>
Steam locomotives	0	90	317
Electric locomotives	0	53	146
Electric cars	0	3,686	5,396
Passenger cars	0	156	659
Freight cars	0	947	6,825

SOURCE: Ministry of Transportation.

3. Inadequate supplies of coal have been forcing a gradual curtailment of the rail transportation still in operation. This trend has apparently been arrested. Coal production is increasing to such an extent that larger allocations for the government railroads are now available. As a result, it has been possible to re-established some of the essential services previously suspended.

4. The 1945 consumption of coal by government railroads for the first seven months of the fiscal year has been reported as follows:

GOVERNMENT RAILROADS

<u>Month 1945</u>	<u>Coal Consumption</u> <u>(Metric Tons)</u>
April	641,000
May	640,000
June	590,000
July	549,000
August	483,000
September	468,000
October	472,000

SOURCE: Ministry of Transportation.

Actual consumption between October and the present date has not yet been compiled. Allocations of coal for the months through March are listed below:

COAL ALLOCATIONS  
(Metric Tons)

<u>Month</u>	
November '45	464,000
December '45	410,000
January '46	445,000
February '46	524,000
March '46	625,000 <sup>a/</sup>

<sup>a/</sup> Estimate

SOURCE: Ministry of Transportation.

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Actual consumption will probably prove greater than the allocations. The difference will have to be supplied from existing railroad stockpiles.

The following data indicate the consumption of coal in some recent years by Government railroads.

COAL CONSUMPTION (Metric Tons)	
1926	3,210,000
1936	3,974,000
1941	5,771,000
1942	6,486,000
1943	7,237,000
1944	7,928,000
1945	6,500,000 a/

a/ Estimate

SOURCE: Ministry of Transportation.

5. The Ministry of Transportation is expected to submit a proposal for increasing rates on government railroads. Labor's demands for increased wages, and rehabilitation and improvement of plant and equipment are given as reasons for the increase.

The plan intends raising passenger fares two and one half times and freight rates three times the present rates. An increase in revenue of ¥ 2,600,000,000 from passenger fares and ¥ 800,000,000 from freight charges is expected.

Private railroads will undoubtedly make similar requests if the new government railroad rates are authorized.

6. The Ministry of Transportation is preparing a request for electrification of many lines that are now steam operated. The project will be scheduled over a 10 year period. The change will reduce coal consumption, increase both passenger and freight traffic capacity, and improve the service by speeding it up and eliminating smoke.

The scope of the proposal is very ambitious and embraces all four islands of Japan. Selection of the lines to be electrified will be on the basis of density of traffic, distances from coal sources, tunnels and heavy gradients and suburban lines in and around large cities where commuting passenger traffic is heavy.

Initially, the electric power required will be purchased. In the future the proposal includes construction of government railroad owned plants for power supply.

#### SHIPPING

##### Available Tonnage

7. Destruction of Japanese shipping was very rapid during the latter part of the war. Not only was the number of losses great, but in addition it was the larger vessels that were lost.

At the time of the surrender the merchant fleet had been reduced to one third its prewar numbers. Its average gross tonnage per vessel remaining afloat was reduced to 70% of the average pre-war gross tonnage. These two circumstances reduced total gross tonnage to a quarter of that of November 1941.

Ship Repairs

8. The Japanese merchant fleet consists of vessels built in wartime and old vessels which are in very poor condition. Maintenance on these vessels has been inadequate, resulting in a heavy repair load on ship repair facilities. The following table shows the number of merchant ships in service and under-going repairs:

**MERCHANT SHIPS**  
January 1946

Date	In Service		Under Repair			
	No.	Gross tons	No.	Gross tons	No.	Gross tons
			(In service since occupation)		(Not in service since occupation)	
1 Jan	453	531,072	146	276,704	82	180,290
10 Jan	469	545,330	129	237,746	82	180,290
20 Jan	460	574,741	136	210,511	66	208,922

SOURCE: Shipping Control Authority, Japanese Merchant Marine.

9. There are 34 civilian shipyards engaged in repair work. From 20 December 1945 to 20 January 1946 they completed repairs on 214 vessels of 417,000 gross tons. The three navy yards, Kure, Maizuru and Oninato that are in operation as repair facilities completed 38 repair jobs during January 1946.

10. De-militarized Japanese Navy ships are being used in repatriation service and in mine sweeping operations in and around ports and harbors. The following table shows the number of navy ships in service and under repair:

**DE-MILITARIZED NAVY SHIPS**  
January 1946

Date	Repatriation			Mine Sweeping		
	In Service	Under Repair	Total	In Service	Under Repair	Total
1 Jan	63	86	149	15	16	31
10 Jan	57	92	149	21	10	31
20 Jan	78	70	148	20	11	31

SOURCE: Shipping Control Authority, Japanese Merchant Marine.

11. Dry cargo coastwise shipping is predominately coal and coke, as shown by the following figures:

0135



**COASTWISE SHIPPING IN STEEL BOTTOMS OF 100 TONS OR OVER  
(Long Tons)**

	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>
Coal and Coke	158,659	258,675	144,305	126,046	131,638
All other	<u>24,700</u>	<u>49,053</u>	<u>102,753</u>	<u>60,272</u>	<u>68,581</u>
Total	183,359	307,728	247,058	186,318	200,269

Percentage Distribution

	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>
Coal and Coke	86.5	84.0	58.4	67.7	65.8
All other	<u>13.5</u>	<u>16.0</u>	<u>41.6</u>	<u>32.3</u>	<u>34.2</u>
Total	100.0	100.0	100.0	100.0	100.0

SOURCE: Japanese Civilian Merchant Marine Committee.

12. During January the cargo carried by Japanese tankers between Japanese ports was more than double the December cargo. The most important increase was in black oil.

**CARGO CARRIED BY JAPANESE TANKERS  
(kiloliters)**

	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Total</u>
Black oil	1,001	1,687	3,840	1,919	8,946	17,393
Kerosene	2,704	1,000	1,511	453	755	6,423
Gasoline	0	1,370	0	2,682	2,094	6,146
Light oil	0	1,200	0	0	0	1,200
Diesel oil	0	0	200	0	1,120	1,320
Turpentine	0	0	1,235	1,475	285	2,995
Miscellaneous	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>130</u>	<u>130</u>
Total	3,705	5,257	6,786	6,529	13,330	35,607

13. Except for the importation of a small amount of phosphate rock from the southern islands the ocean shipping of merchandise has been confined to China and Korea as shown in the following tabulation:

**OCEAN SHIPPING OF JAPAN  
(long tons)**

	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Total</u>
Salt from China and Korea	1,749	820	0	13,093	15,661
Pitwood to China	0	0	3,104	2,484	5,588
Coal to Korea	26,001	34,810	49,056	38,985	148,852
Pitch to Korea	<u>0</u>	<u>0</u>	<u>1,335</u>	<u>1,852</u>	<u>3,187</u>
Total	27,750	35,630	53,496	56,620	173,396

SOURCE: Japanese Civilian Merchant Marine Committee.

## ELECTRIC POWER

14. The electric power industry has shown a considerable recovery since the drop in industrial load at the end of the war which reduced the demand to approximately one third of the 1944 peak demand. The recovery is largely attributed to extensive use of electric hot plates and space heaters, renewed industrial activity and needs of the occupying forces.

15. "Electric Power - Yearly Load Curve" Chart No. 19 shows this recovery and also the typical seasonal load variations. The two dry seasons of the month of August, and November through March serve to limit the generation of hydro-electric power. Featured in the chart are the slumps in Japanese industry toward the end of the war, the sharp drops in power load following the heavy air raids and the rapid recovery during the last few months of 1945.

16. At present there exists a surplus of hydro-electric power in most areas. In Northern Kyushu where thermal power generation is predominant 100,000 kilowatts of thermal power is continually generated.

17. One steam station of 25,000 kilowatts capacity was operated in the Chugoku district of southern Honshu for several days but by agreement between the Fuel Bureau of the Ministry of Commerce and Industry and the Japan Generating and Transmission Company it was shut down and the coal supply transferred.

18. Present loads are approximately 60 percent of the 1944 peak and officials estimate that during February the load may be close to 70 percent with a drop expected in the spring when the weather becomes warmer.

19. Distribution system troubles continue in overloaded residential areas despite efforts to reinforce the system with larger transformers and wire. Use of electric heaters is the principal cause.

20. The increase in use of electric power by war industries of Japan, starting in 1931 is illustrated by Chart No. 20. The more gradual increase prior to 1931 and a part of the entire increase should be attributed to the advance in electrical utilization not necessarily of a war nature. This chart also shows the drop in demand during late 1944 caused by the reduction of Japan's war industry from air raids, lack of materials and transportation difficulties.

21. That iron and steel production and the chemical industries dominated power needs is shown by Chart No. 21. The war's effect on other industries' power consumption is also indicated.

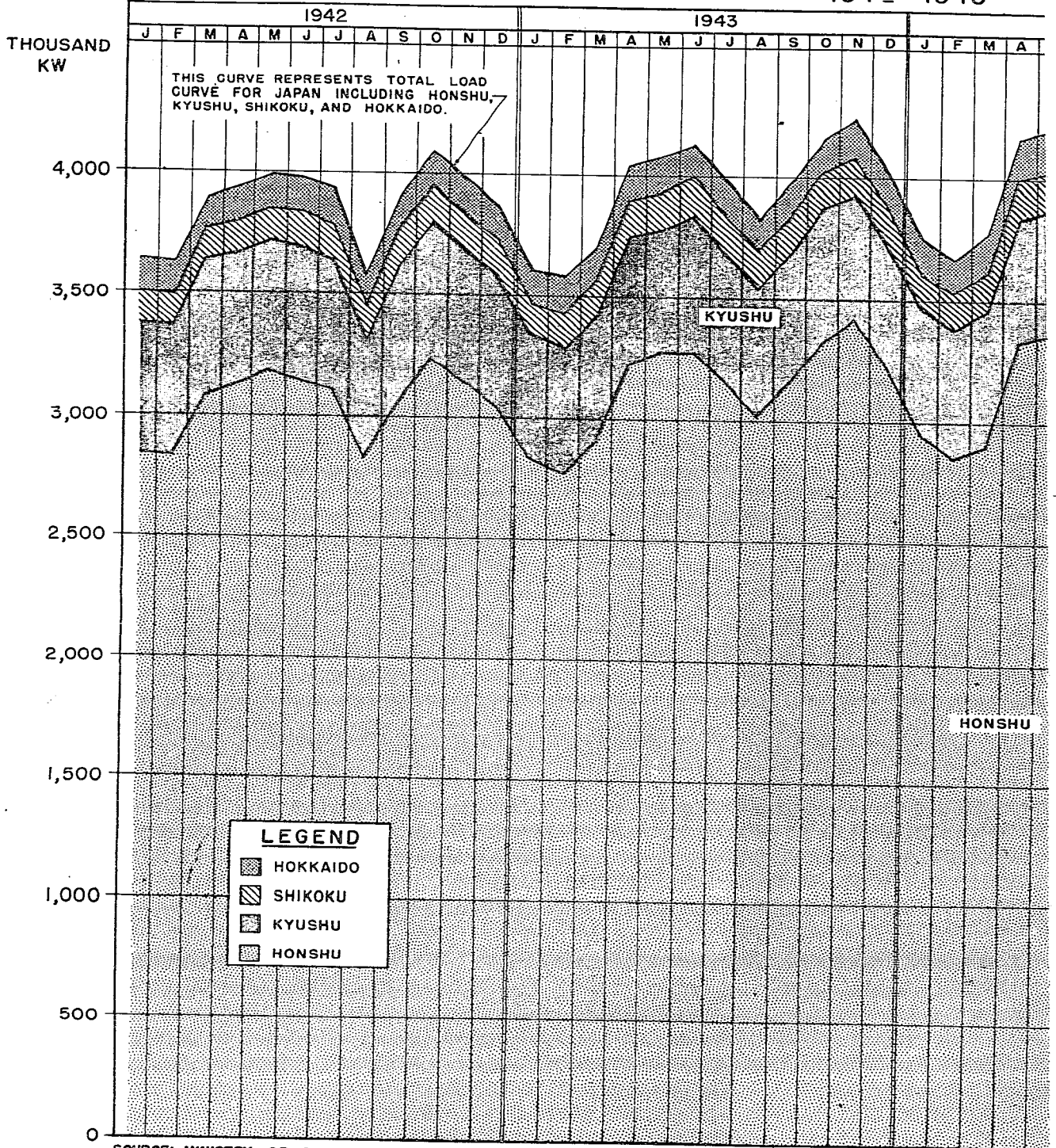
22. Industrial loads plus the evening lighting peaks are illustrated by Chart No. 22.

23. Considerable decrease in load prior to the surrender and the sharp drop of 15th August is shown in Chart No. 23. Also shown are the effects of the air raids of 2-7 December 1944 and 15-16 February 1945. The drop in load 11 February 1945 is attributed to both air raids and a national holiday.

24. The physical condition of the electric power system has changed little since the occupation. Steam plants remain in poor condition caused by air raids and by lack of maintenance, particularly to boilers. Repairs are not being pushed as plants are not needed at this time. Hydro-electric plants were virtually untouched by raids and operating condition ranges from fair to good.

# ELECTRIC POWER - YEARLY LOAD

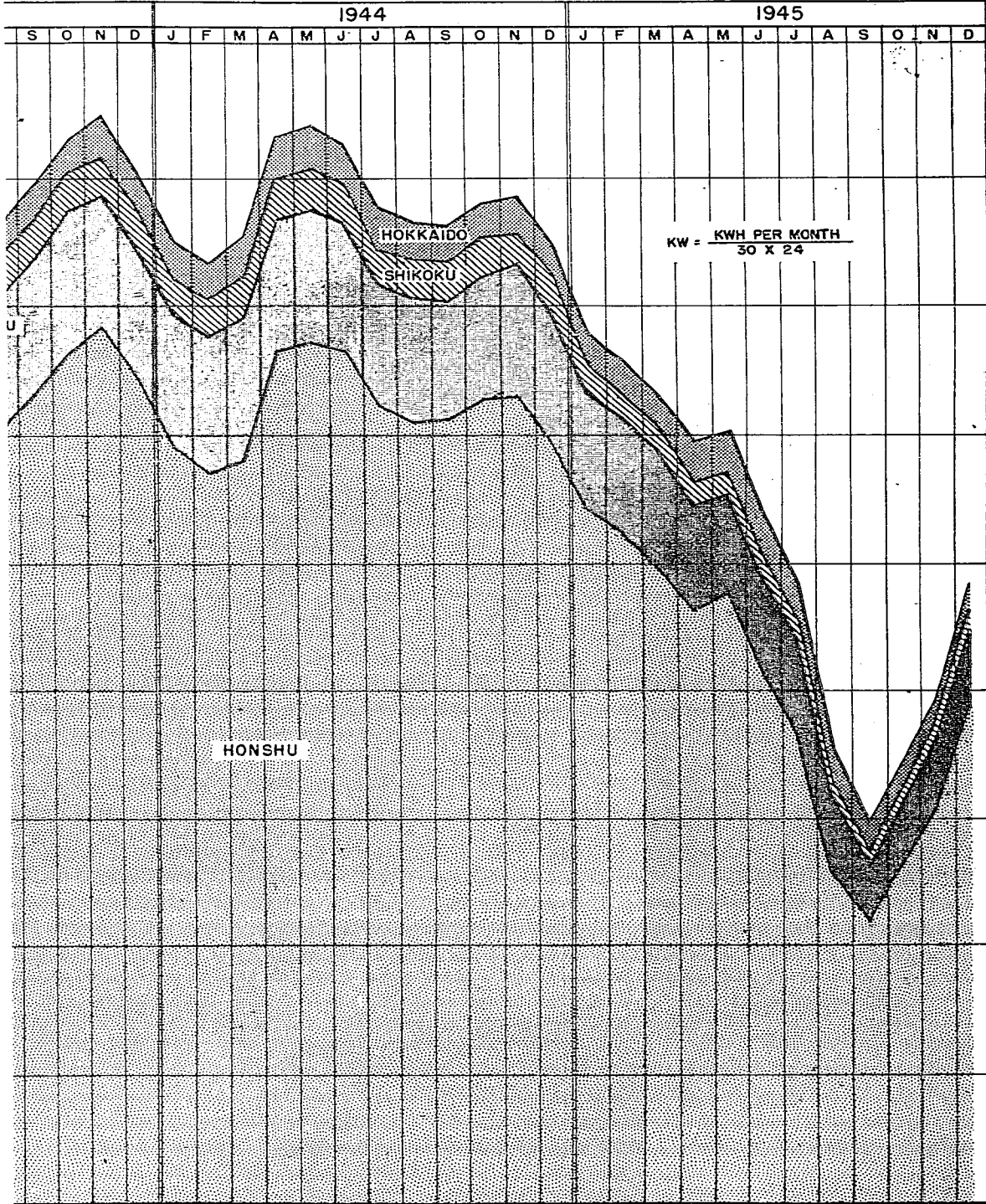
1942-1945



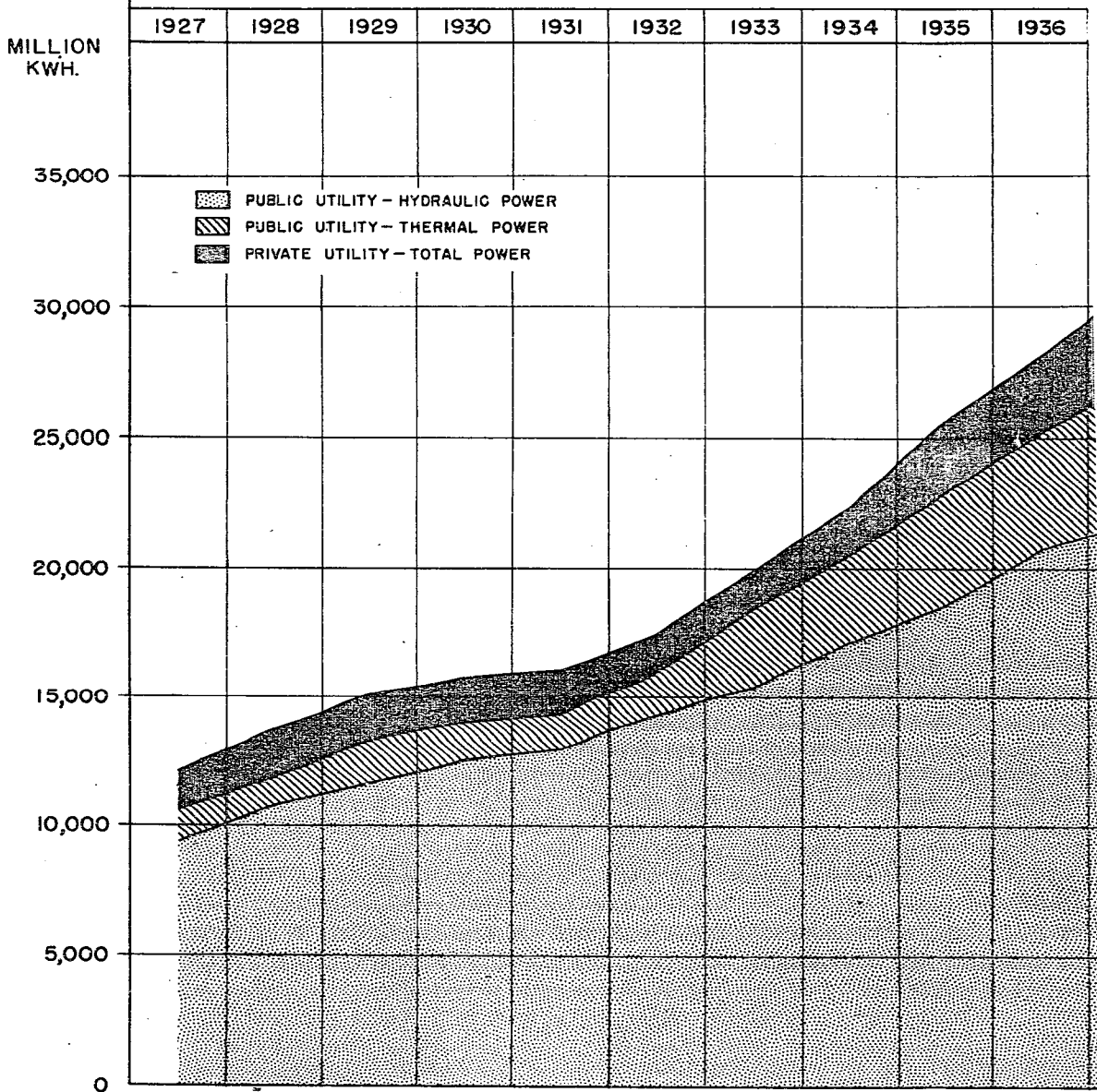
SOURCE: MINISTRY OF COMMERCE AND INDUSTRY, ELECTRIC POWER BUREAU

# - YEARLY LOAD CURVE - JAPAN

1942-1945



# GENERATED ELECTRIC 1927-19



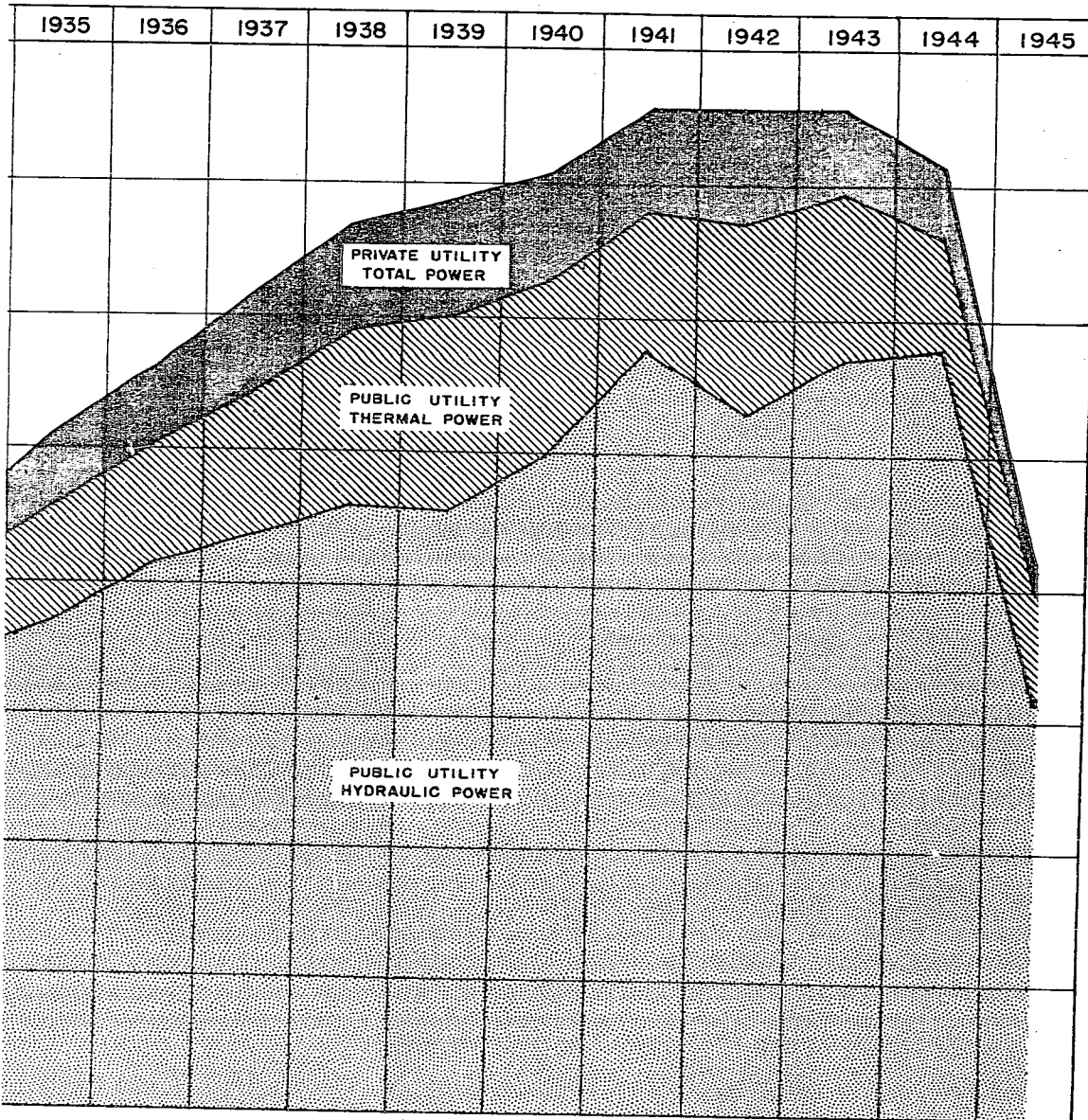
SOURCE: MINISTRY OF COMMERCE AND INDUSTRY, ELECTRICAL POWER BUREAU

**NOTE:**

1. The public utilities figures for years prior to and including the year 1932 cover the electric year 1 December to 30 November. Figures for 1933 and subsequent years cover the fiscal year 1 April to 31 March. Private station figures are for the calendar year.
2. The public utilities figures for 1932 and prior years include a small amount of power supplied to them by private power plants.
3. Private power figures include only power generated by private power plants of 500 KW or more.
4. Power generated by public utilities figure
5. Power generated by in the private power
6. The 1944 figures are

# ELECTRIC POWER - JAPAN

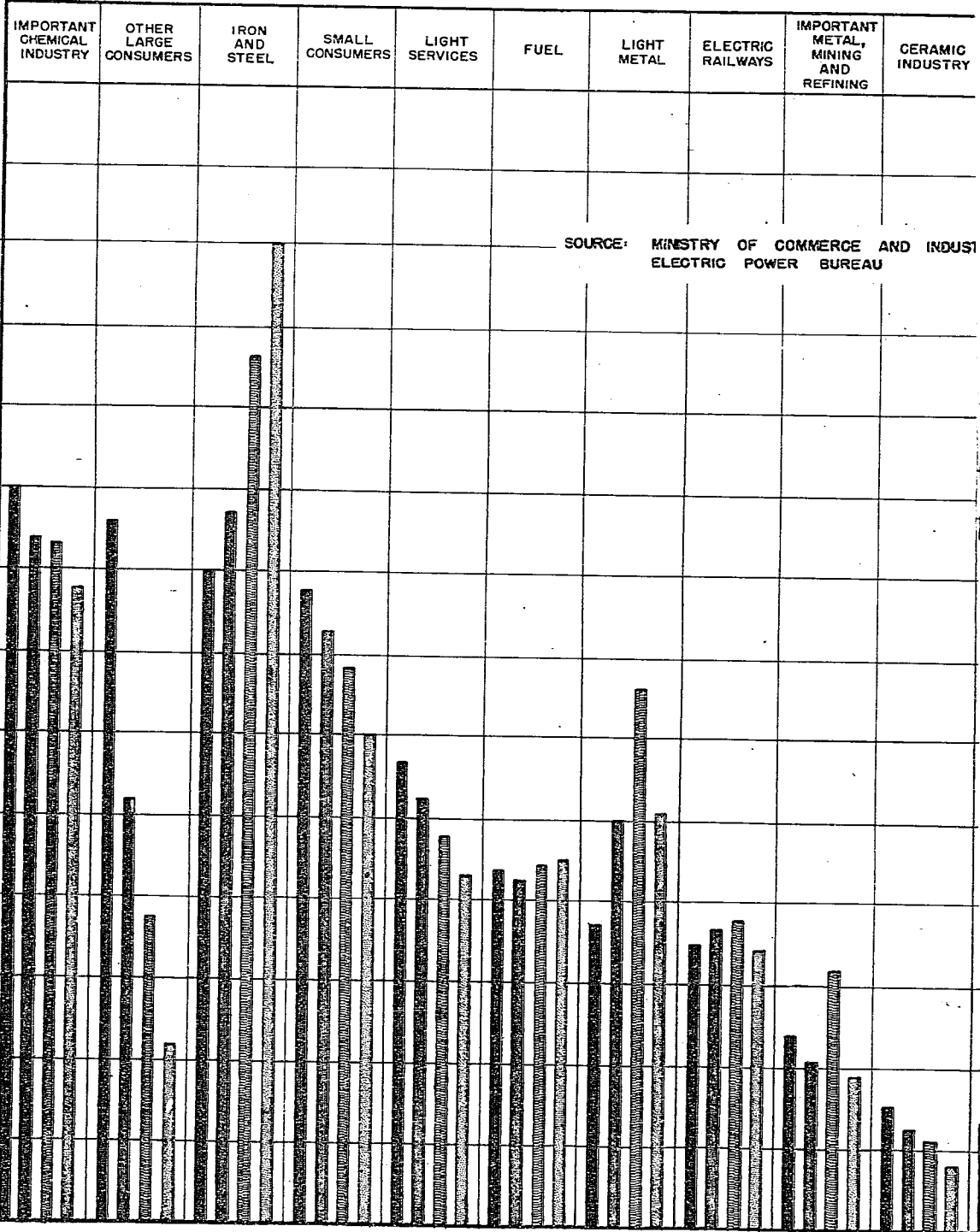
## 1927-1945



4. Power generated by Government Railway power plants is included in the public utilities figures for 1930 and subsequent year.
5. Power generated by the Nippon Steel Company power plants is not included in the private power figures until 1933 and subsequent years.
6. The 1944 figures are partially estimated.

# ELECTRIC POWER CONSUMPTION BY T

MILLIONS OF  
KILOWATT  
HOURS

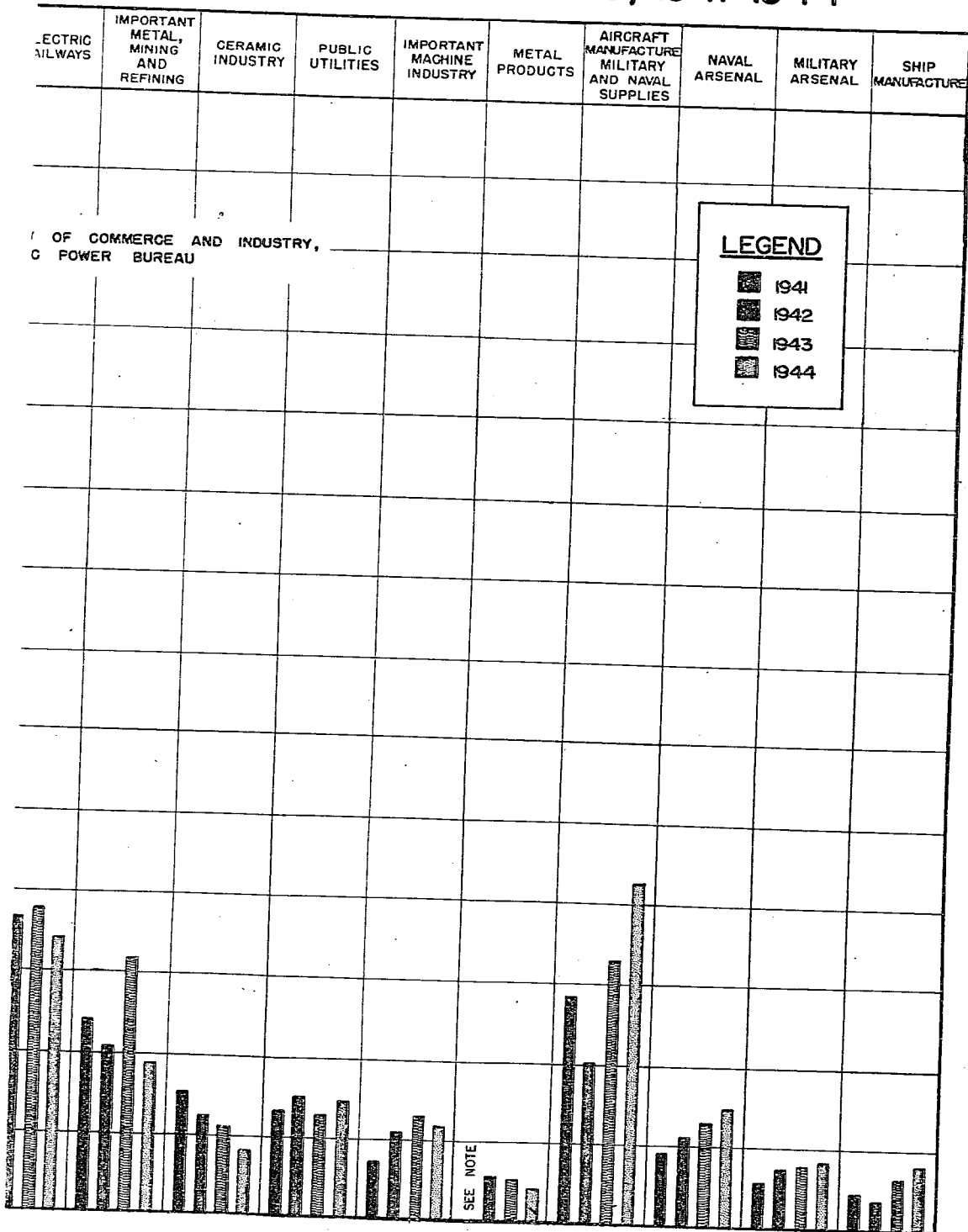


SOURCE: MINISTRY OF COMMERCE AND INDUSTRY  
ELECTRIC POWER BUREAU

NOTE: INCLUDED IN, "IMPORTANT METAL, MINING AND REFINING"

0140 1/2

# ADDITION BY TYPES OF USERS, 1941-1944



U.S. DEPARTMENT OF COMMERCE AND INDUSTRY,  
 FEDERAL BUREAU OF POWER

**LEGEND**

- 1941
- 1942
- 1943
- 1944

SEE NOTE

0140 2/2





# ELECTRIC POWER

TYPICAL DAILY LOAD CURVES  
ALL PUBLIC UTILITIES - JAPAN

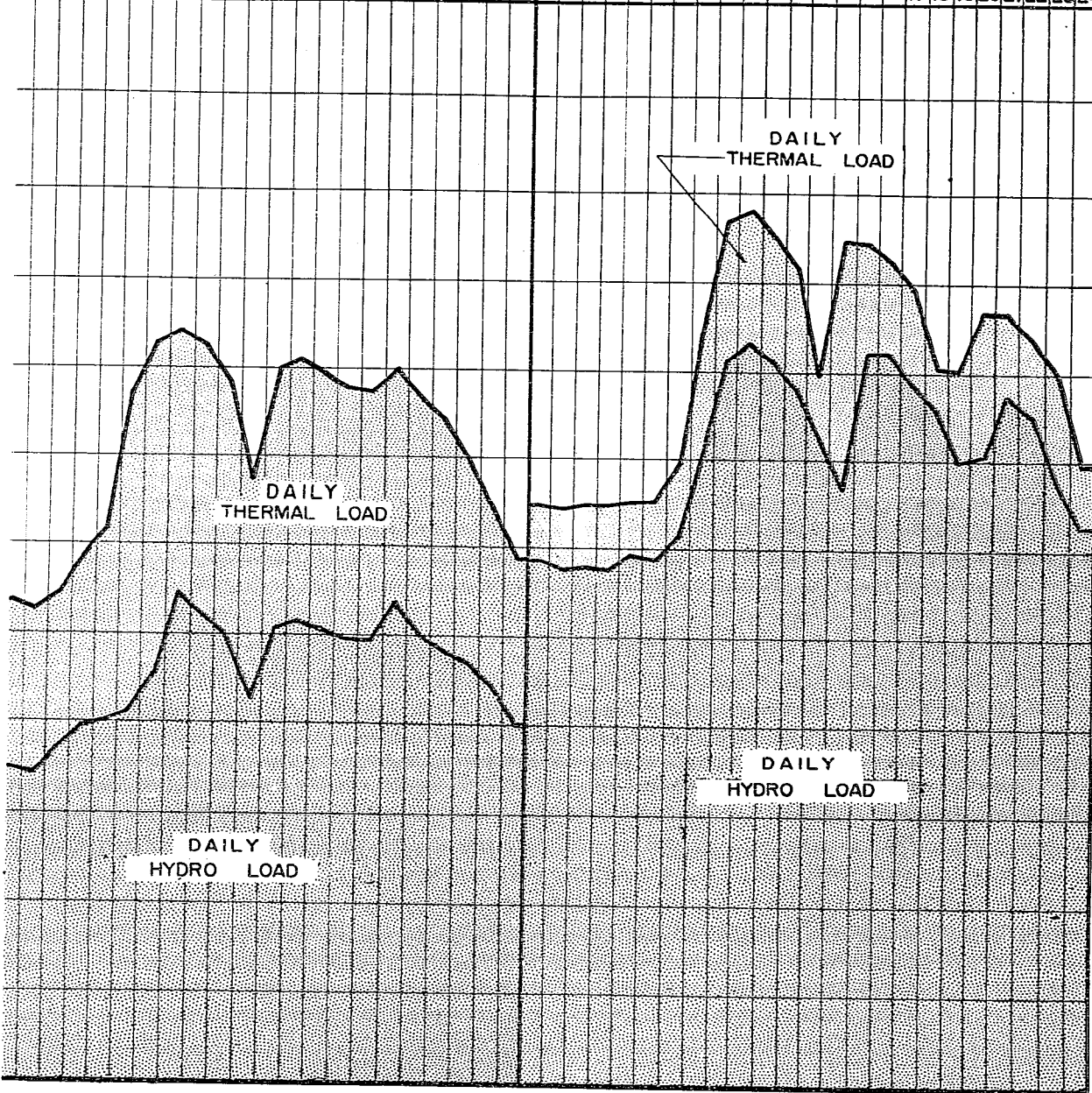
FEBRUARY 17, 1943

MAY 19, 1943

HOURS OF THE DAY

HOURS OF THE DAY

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

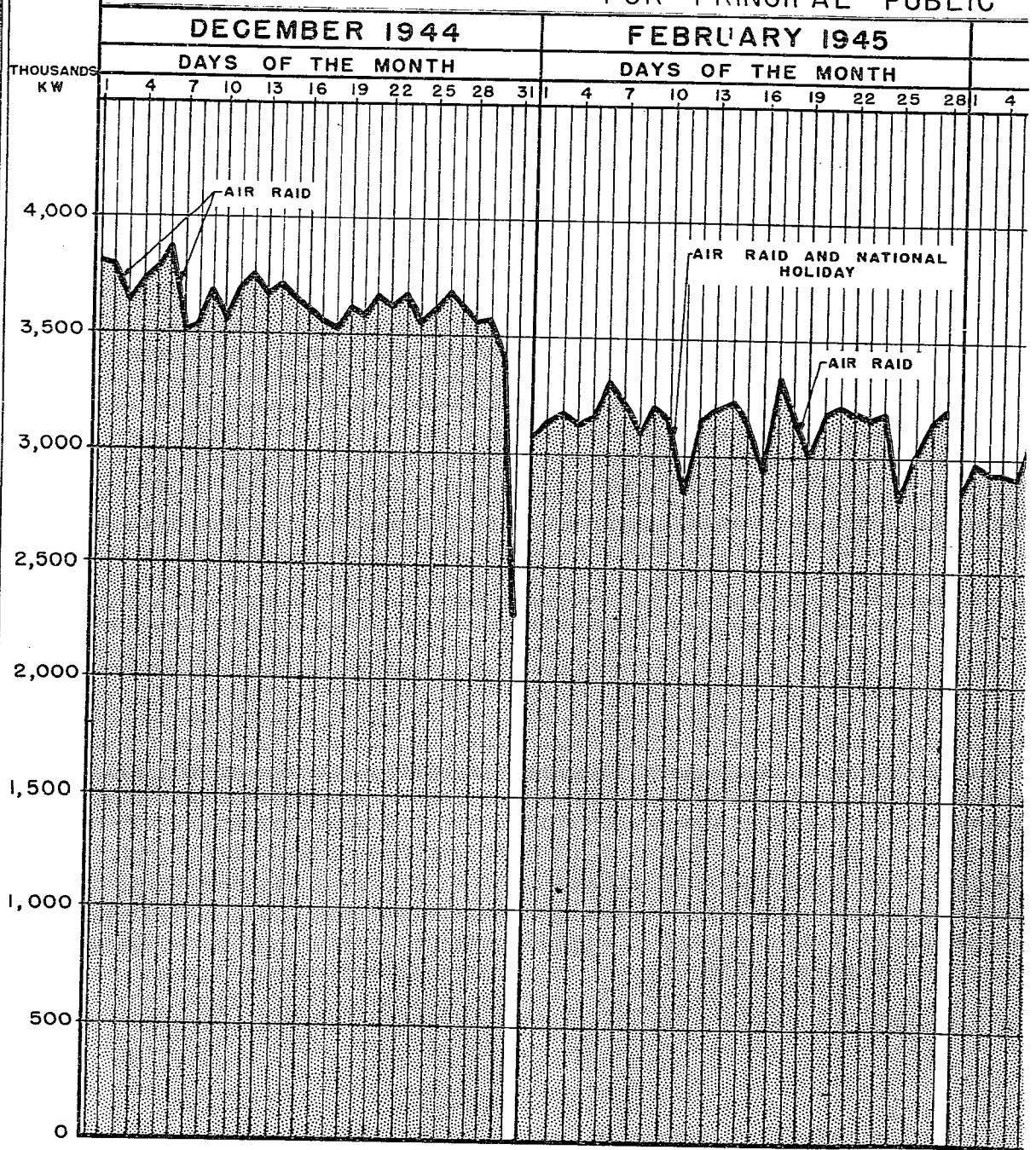


BUREAU  
41 1/2

JANUARY 46 GHQ SCAP NUMBER 22

0141 3/2

# ELECTRIC TYPICAL MONTHLY FOR PRINCIPAL PUBLIC



SOURCE: MINISTRY OF COMMERCE AND INDUSTRY, ELECTRIC POWER BUREAU

0142 1/2

**ELECTRIC POWER**  
**MONTHLY LOAD CURVES**  
**PUBLIC UTILITIES - JAPAN**



1/2

0142 3/2

25. The strikes in the power industry have been settled by the companies agreeing in principle to the demands for increased wages and most other controversial points.

26. No progress towards frequency unification has been made by the committee appointed by the government.

#### GAS INDUSTRY

27. For the past three months coal allocations have limited manufacture of public utility gas to a few hours per day. Use of stockpiles was necessary to maintain even this limited service. The current improvement in coal production permits an increased allocation for February to 71,500 metric tons from the 42,000 metric tons per month allocated for December and January. It is not expected that an immediate increase in the hours of service will be possible as there are no longer surplus stocks available to supplement the allocations.

28. A study of gas rates is being made by the Coal Bureau, Ministry of Commerce and Industry.

0143-2.

SECTION 5  
IMPORTS AND EXPORTS

C O N T E N T S

	Paragraph
Trade Policy . . . . .	2
Interim Trade . . . . .	4
Export and Import Commodities . . . . .	5
Port Facilities and Customs . . . . .	14

1. Japanese import trade programs for 1946 were compiled. Export trade programs for 1946 are being compiled.

The first shipment of U.S. Army food to meet essential civilian requirements arrived and critically needed diesel oil and medical supplies are being released to the Japanese Government from surplus stocks of the Occupation Forces. In January shipments of mining timbers, coal, pitch and communications equipment were made to Korea, China and Hongkong.

TRADE POLICY

2. All foreign trade of Japan is on a government to government basis under the direct control and administration of the Supreme Commander.

Trade Progress

3. The Japanese Government supplied estimated 1946 import requirements and estimates of potential Japanese exports for 1946.

INTERIM TRADE

4. The following shipments were made during January 1946:

<u>Commodity</u>	<u>From</u>	<u>Quantity</u>
<u>Imports</u>		
Diesel oil	U.S. Army	42,650 barrels
Medical supplies	U.S. Army	(Various)
Wheat flour	U.S. Army	1,000 short tons
<u>Exports</u>		
	<u>To</u>	
Silk piece goods	Occupation Forces	15,000 bolts
Mining timbers	China	69,410 pieces
Coal	Hongkong	29,106 metric tons
Coal	Korea	14,085 metric tons

<u>Exports</u>	<u>Commodity</u>	<u>To</u>	<u>Quantity</u>
	Communications equipment	Korea	(Amounts and values being consolidated)
	Pitch	Korea	990 metric tons
	Medical supplies	Korea (from U.S. Army)	(Amounts not yet recorded)

SOURCE: Japanese official reports.

#### EXPORT AND IMPORT COMMODITIES

##### Exports

5. Official Japanese test certificates covering 8,528 bales of raw silk have been submitted to SCAP to date. The test certificates have been analyzed and 663 bales are considered to be unsuitable for export. The balance considered suitable for export include the following quantities:

SP AAA 20/22 White	- 1,830	bales	1/
AAA 20/22 "	- 670	"	
AA 13/15 "	- 780	"	
A 13/15 "	- 1,060	"	
B 13/15 "	- 1,230	"	
C 13/15 "	- 1,150	"	
D 13/15 "	- 1,045	"	
B 20/22 Yellow	- 40	"	
C 20/22 "	- 60	"	
TOTAL		7,865	bales

1/ of 132 pounds.

A directive was issued 29 January to the Japanese Government requiring that 1,500 bales of white silk 20/22 denier and 1,100 bales of white 13/15 denier be prepared for export and that necessary invoices and related documents be submitted to SCAP by 7 February 1946.

The Japanese Government was directed to prepare for shipment 150,000 sheets of silk worm eggs and to deliver them by early March for air shipment to China. More than 2,000,000 mulberry seedlings are to be shipped to Korea and China to revive sericulture in those countries.

6. Samples of tea available for export have been taken from a considerable part of 35,397 cases in warehouses. This quantity is comprised as follows:

#### TEA AVAILABLE FOR EXPORT

<u>Type</u>	<u>Quantity</u>	<u>Weight</u>
Black	7,143 cases a/	664,260 lbs.
Black	7,254 cases	570,000 lbs.
Green and Brick	21,000 cases	2,002,500 lbs.

a/ Includes some Formosa, China and Java teas.

SOURCE: Survey by this Headquarters.



7. Reports have been supplied to the U.S. Commercial Company on quantities of bamboo, raw fure, tengujo paper (used in mimeograph stencils), straw braid, tea, trees, shrubs, flower seeds and bulbs available for export. Twenty-two hundred pounds of vegetable seeds are now available for export. Report on details of 10,000 tons of leather frozen for export has been forwarded.

8. Samples of handicraft products are being collected and export production capacity figures are being compiled. Among the commodities considered in this program are: lacquer ware, woven art crafts, metal crafts, costume jewelry, toys, ivory carvings, woodcrafts and novelties of all descriptions.

9. Export to Korea of standard gauge railway rolling stock now held in warehouses was ordered. Manufacture of chlorinators for Korea was arranged. Coal shortage is expected to be a considerable factor in the volume of production of many export articles.

Various shipping conditions during the second half of January retarded the exportation of mining timbers to China, while the present rate of production and delivery is considerably below the current export program of 200,000 to 300,000 pieces monthly. A representative arrived to assist in effecting supply of essential materials needed for operation of Kailan mines in North China.

10. Cigarette paper is to be supplied to Korea and requirements for cigarette package paper are being checked.

11. The Japanese Government was directed to prohibit transactions in pearls except for retail sales up to the volume of the dealer's sales in the preceding three months, and a complete inventory was ordered of all holdings of pearls for other than normal business or personal use.

#### Imports

12. One thousand short tons of wheat flour from U.S. Army stocks in Manila arrived in Japan and is about to be delivered to the Japanese government for distribution to meet emergency civilian requirements.

13. The Japanese Government was directed to send a ship to Rota in the Mariana Islands to take delivery of 12,000 tons of phosphate rock for the manufacture of much needed super-phosphate fertilizer. Delivery is to be taken of 3,300 tons of phosphate rock from Kita Daito Island. There are sufficient stocks of sulfuric acid in Japan for the conversion of phosphate rock into fertilizer.

#### PORT FACILITIES AND CUSTOMS

14. More effective action to stop smuggling and to apprehend violators was directed. There have been unauthorized movements of rice from Korea into Japan. Arrangements were made to return to Japanese use some of the Yokohama and Kobe silk conditioning premises for reinstallation of raw silk testing equipment removed during the war.



SECTION 6

LABOR

C O N T E N T S

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Labor Legislation . . . . .	2
Labor Unions. . . . .	3
Labor Relations . . . . .	6
Wages . . . . .	12
Employment. . . . .	21
Coal Mine Labor . . . . .	28
Recruitment of Seamen . . . . .	32
Special Labor Problems. . . . .	36

1. Japanese estimates indicate that only about 14 percent of the nation's workers earn enough money to meet the rising cost of living. As a result unions are being formed at the rate of two a day with the more strongly organized securing wage increases averaging 300 percent.

LABOR LEGISLATION

2. The Ministry of Welfare reported that preparation of the Imperial Ordinance implementing the Labor Union Law has been delayed.

A preliminary draft of the Labor Disputes Bill which is intended to supplement the Labor Union Law was prepared by the Labor Legislation Committee of the Ministry of Welfare.

LABOR UNIONS

3. January was characterized by the formation of regional and industrial federations and councils, looking forward to the formation of a national federation of all labor unions.

On 28 January 1946 the Preparatory Committee for a National Federation of Labor held a meeting in Tokyo attended by representatives of unions and councils from all over the nation. Motions were carried to effect the federation and to nominate Komakichi Matsuoka, prewar Social Democrat labor leader, as its first president.

The meeting reported that new labor unions were being organized at the rate of two a day and that 288 unions with a total membership of more than 325,000 were ready to affiliate with the proposed national federation. The breakdown is shown below:

0147